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Economic Impact Analysis, RCRA
(Resource Conservation and Recovery Act)
Interim Status Standards. Volume III

Arthur D. Little, Inc.
Cambridge, MA

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1981



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ECONOMIC IMPACT ANALYSIS
RCRA INTERIM STATUS STANDARDS

Volume - III

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This appendix discusses the data bases on which model plant specifications were based and expands on the specifications for surface impoundments. The last section of the appendix contains the data for all 22 industries used in calculating compliance costs. The major sources of data for the model plants are summarized.

KEYWORDS: *Economic impact, *Hazardous materials,
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APPENDIX G
MODEL PLANT DATA

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APPENDIX G

MODEL PLANT DATA

This appendix discusses the data bases on which model plant specifications were based and expands on the specifications for surface impoundments. The last section of the appendix contains the data for all 22 industries used in calculating compliance costs. The major sources of data for the model plants are summarized at the end of Section 2, below.

1. MODEL PLANT DATA BASE

Chapter V discusses the methodology for development of model plants. The data base for developing the model plants is discussed here.

Data to develop model plants for industry segments and industries came from several sources and varied widely in probable accuracy and completeness. A discussion of the general approaches used to develop model plants follows:

- (1) *Update of BATEA Study Data.* Table G-1 lists the industry segments for which the model plants developed for the BATEA reports were updated for the current analysis. For example, since these models were first developed, some plants have closed and were therefore dropped from the model. Others not previously represented in the models were added. Segments of industries were also altered to reflect specifications of a plant that significantly affect its hazardous waste generation and treatment methods.
- (2) *Use of Published Data Reflecting Plant Capacity.* Table G-2 lists the industries for which published plant capacities were used to develop model plants.
- (3) *Use of Census Bureau Data.* The assumption that production is directly proportional to employment is strongest for labor-intensive industries that involve fabrication or assembly. Table G-3 lists the industries for which this assumption was used. Table G-4 depicts a sample of the data available from the Census Bureau that were used in the development of these models.
- (4) *Use of Miscellaneous Data Sources.* A variety of data sources, were used for the models for the industries listed in Table G-5. These sources included articles in journals, proprietary data bases, surveys, plant visits, and telephone interviews.

The major data sources used to construct all the model plants used in this analysis are listed at the end of the next section.

TABLE G-1
INDUSTRY SEGMENTS FOR WHICH MODEL PLANTS
WERE BASED ON BATEA DATA

SIC Code	Industry	SIC Code	Industry Segment or Subsegment
22	Textile Manufacturing		
		2231	Wool Finishing - Direct
		2231	Wool Finishing - Indirect
		2251	Knit Simple - Direct
		2251	Knit Simple - Indirect
		2251	Knit Complex - Direct
		2251	Knit Complex - Indirect
		2251	Knit Hosiery - Direct
		2251	Knit Hosiery - Indirect
		2261	Woven Simple - Direct
		2261	Woven Simple - Indirect
		2261	Woven Complex - Direct
		2261	Woven Complex - Indirect
		2261	Woven Complex plus Desizing - Direct
		2261	Woven Complex plus Desizing - Indirect
		2269	Stock and Yarn - Direct
		2269	Stock and Yarn - Indirect
		2272	Carpet - Direct
		2272	Carpet - Indirect
		2291	Felted Fabric - Direct
		2291	Felted Fabric - Indirect
		2297	Nonwoven - Direct
		2297	Nonwoven - Indirect
		2299	Wool Scouring - Direct
		2299	Wool Scouring - Indirect
281	Inorganic Chemicals		
		2812	Chlorine - Diaphragm Cell Process
		2812	Chlorine - Mercury Cell Process
		2816	Chrome Pigments
		2816	Titanium Dioxide - Chloride Process
		2816	Titanium Dioxide - Chloride Process Using Ilmenite Ore
		2816	Titanium Dioxide - Sulfate Process
		2819	Sodium Dichromate

TABLE G-1 (Continued)

SIC Code	Industry	SIC Code	Industry Segment or Subsegment
3111	Leather Tanning and Finishing		
		3111	Chrome Tan, Pulp Hair
		3111	Chrome Tan, Save Hair
		3111	Nonchrome Tan
		3111	Retan - Wet Finish
		3111	No Beam House
		3111	Thru-the-Blue
		3111	Shearlings
		3111	Finishers
333, 334	Nonferrous Metal Smelting and Refining		
		3331	Primary Copper
		3332	Primary Lead
		3333	Primary Zinc
		3334	Primary Aluminum
		3339	Primary Mercury
		3339	Primary Tungsten
		3341	Secondary Aluminum - Dross Processing
		3341	Secondary Aluminum - Nondross Processing
		3341	Secondary Copper - Brass and Bronze Ingot
		3341	Secondary Copper - Blast Furnaces
		3341	Secondary Copper - Other
		3341	Secondary Lead - Battery Cracking
		3341	Secondary Lead - Nonbattery Cracking

Sources: Arthur D. Little, Inc.

TABLE G-2
INDUSTRY SEGMENTS FOR WHICH MODEL PLANTS
WERE BASED ON CAPACITY DATA

SIC Code	Industry	SIC Code	Industry Segment or Subsegment
2819	Inorganic Chemicals		
		28194	Boric Acid
		2819	Phosphorus Pentasulfide
		2819	Phosphorus Trichloride
282	Plastic Materials, Synthetic Rubbers, and Synthetic Fibers		
		2821	Plastic Materials and Resins • Polypropylene • ABS/SAN • Polystyrene • Coumarone — Indene
		2822	Synthetic Rubbers • SBR • Polybutadiene • Neoprene
		2823	Cellulosic Manmade Fibers • Rayon
		2824	Synthetic Organic Fibers • Acrylics
286	Organic Chemicals		
		28612	Nitrobenzene
		28651	Toluene Diisocyanate
		28651	Furfural
		28651	Benzylchloride
		28692	Chlorobenzene
		28692	Epichlorohydrin
		28692	Methyl Methacrylate
		28692	Maleic Anhydride
		28692	Lead Alkyls
		28692	Ethanolamines
		28692	Fluorocarbons

Source: Arthur D. Little, Inc.

TABLE G-3

**INDUSTRY SEGMENTS FOR WHICH MODEL PLANTS
WERE BASED ON CENSUS DATA**

SIC Code	Industry	SIC Code	Industry Segment or Subsegment
283	Pharmaceutical	2831	Biological Products
		2833	Medicinals and Botanicals
		2834	Pharmaceutical Preparations
2851	Paint and Allied Products		
2879	Agricultural Services		
2892	Commercial Explosives		Fixed High Explosives Blasting Agents
2992	Petroleum Rerefining		
30	Rubber Products	3011	Tires and Inner Tubes
		3021, 3031, 3041, 3069	Other Rubber Products
355	Special Machinery	357	Office Computing and Accounting Machines
367	Electronic Components & Accessories		
369	Batteries	3691	Storage Batteries
		3692	Primary Batteries

Source: Arthur D. Little, Inc.

TABLE G-4

TYPICAL CENSUS DATA

2831 BIOLOGICAL PRODUCTS

Employment Class	<10	10-49	50-99	100-249	250-499	500-999	>1,000
No. of Plants in Class	126	90	32	18	12	5	1
Cumulative No. of Plants	126	236	268	286	298	303	304
Employment in Class	458	2,264	1,907	2,454	3,984	2,918	1,115
Cumulative Employment	458	2,722	4,629	7,083	11,067	13,985	15,100

Source: Arthur D. Little, Inc.

TABLE G-5

INDUSTRY SEGMENTS FOR WHICH MODEL PLANTS WERE BASED ON
MISCELLANEOUS DATA SOURCES

SIC Code	Industry	SIC Code	Industry Segment or Subsegment
0711, 0721, 0729	Agricultural Services		
2491	Wood Preserving		
282	Plastic Materials, Synthetic Rubbers, and Synthetic Fibers		
		2821	Plastic Materials and Resins • Phenolic Resins • Amino Resins • Alkyd Resins
286	Organic Chemicals		
		2869	Acrylonitrile
		2869	Chloromethanes/Perchloroethylene
		2869	Ethylene Dichloride/Vinyl Chloride Monomer
		28694	Technical Pesticides
2911	Petroleum Refining		
33	Ferrous Metals		
		3312	Iron & Steel
		3313	Ferroalloys
		332	Ferrous Foundries
347	Electroplating		
		3471,3479	Job Shops Misc. Captives
5085	Drum Reconditioning		
5161	Chemical Wholesaling		

Source: Arthur D. Little, Inc.

2. SURFACE IMPOUNDMENT SPECIFICATIONS FOR MODEL PLANTS

For this analysis, all surface impoundments have been assumed to fall into one of two categories: disposal impoundments or treatment/storage impoundments. A disposal impoundment is one in which waste is allowed to accumulate continuously until the impoundment is "full," at which time it is closed. A treatment/storage impoundment may be periodically dredged to remove the accumulated waste for disposal elsewhere. In both cases, liquid may be recycled, stored, or discharged. This analysis does not distinguish between treatment impoundments and storage impoundments or between different types of treatment impoundments.

a. Data for Specifications

Assignment of surface impoundments to the model plants in this analysis has been based on published and unpublished data, limited surveys of selected industries, and information from industry experts. The surface impoundment specification for any model plant contains three types of information:

- Number of actual plants represented by the model plant that have impoundments — disposal, treatment/storage, or both;
- Number of disposal and treatment/storage surface impoundments per plant; and
- Aggregate surface area per actual plant for all disposal and all treatment/storage impoundments.

(1) SIA Data

The source of information for most industries was the Surface Impoundment Assessment Information System (SIA) data base, assembled by the EPA, Office of Drinking Water, in 1978-1980. The purpose of the program was to determine the effects of industrial and agricultural surface impoundments on groundwater quality. The Office of Drinking Water requested that each state develop an inventory of surface impoundments, categorized by a single 4-digit SIC descriptor. The inventory was to contain information on characteristics that would be useful in determining the effect on groundwater quality of the impoundments at any single plant.

For plants with multiple impoundments reported, only one was characterized, even though each surface impoundment is likely to be different. Arthur D. Little, Inc., assumed this would not significantly affect compliance costs because the survey characterized a large number of all types of impoundments, thereby assuring a representative sample.

Many of the plants surveyed produce goods under more than one SIC category but the impoundments are assigned to a single SIC category. This analysis assumes that this assignment would not affect compliance costs because the survey characterized a large number of plants, thereby assuming a representative sample.

(2) Other Published Data Sources

Published data sources have been used, whenever possible, to verify or complete the analysis for each industry. For some industries, comprehensive listings are available that describe the processing capabilities of all plants, e.g., petroleum refineries.* Such information, combined with a knowledge of which processes produce hazardous wastes, allows assignment of surface impoundments to the various model plants with a high degree of confidence.

For other industries, the EPA Hazardous Waste Assessment reports were used to provide insight into where impoundments are used and what hazardous wastes are disposed of in impoundments.

(3) Independent Surveys of Industry

The "high-impact" industries were surveyed by other contractors to EPA.

Figure G-1 shows the methodology used and major sources of information for determining surface impoundment data. The first group of columns deals with the number of plants with either disposal or treatment/storage impoundments or both; the second with the number of impoundments per plant; and the third with aggregate surface area per plant (by type of impoundment).

The specifications were calculated for each industry and model plant, in the order that they are listed, starting with the number of plants with impoundments. These surface impoundment specifications for each industry and industry segment are shown in the tables at the end of this appendix. Examples of the methodology and calculations for determination of surface impoundment specifications are given below.

b. Application of Data

Several methodologies were developed for assigning surface impoundments to different industries, based on the amount and quality of the information available.

(1) Calculation of Number of Plants with Impoundments

The first methodology is the application of data from the SIA data base. Because this inventory incorporates about 94%** of the actual industrial impoundments, the data were used for calculation of surface impoundment specifications. The following modifications to the SIA data were made for this study:

- Because the survey was not a complete census of impoundments, the number of plants identified as having impoundments was multiplied by a factor of 1.069 (to account for the approximately 6% of sites that were not included) for all industries and both types of impoundments.

*Cantrell, Aileen, "Annual Refinery Survey," Oil and Gas Journal, March 24, 1980, p. 130 ff.

**The EPA, Office of Drinking Water estimates that there are 11,000 industrial plants with surface impoundments, of which 10,368 are identified in the SIA data bank.

	Number of Sites with Impoundments					Number of Impoundments Per Site			Impoundment Surface Area Per Site	
	Method 1: SIA Data Base	Method 2: Non-Gov. Published Sources	Method 2: Gov. Published Sources	Method 3: Industry Experts	Method 4: Industry Survey	SIA Data Base	Other Primary Data Bases	Industry Experts	SIA Data Base	Industry Expert
Agricultural Services	1					1			1	
Textile Manufacturing	1	13		13	13		11		1	11
Wood Preserving	1					1			1	
Inorganic Chemicals	1			2			2			2
Plastic Materials, Synthetic Rubbers, and Synthetic Fibers	1	3	4			1			1	
Pharmaceuticals	1		5			1			1	
Paint and Allied Products	1		6			1			1	
Organic Chemicals	1			7		1	7		1	7
Pesticides	1									
Commercial Explosives	1					1			1	
Petroleum Refining		17								
Petroleum Rerefining	1		8			1			1	
Rubber Products	1		9	10		1			1	
Leather Tanning and Finishing				12	12		12			12
Ferrous Metals	1	18		10		1			1	
Nonferrous Metals					13		13			13
Electroplating	1		14			1			1	
Special Machinery Manufacturing	1					1			1	
Electronic Components	1		15			1			1	
Batteries	1					1			1	
Drum Reconditioning	1					1			1	
Chemical Wholesaling	1					1			1	

Note: See page for legend:

FIGURE G-1 METHODOLOGY AND DATA SOURCES USED TO
DEVELOP SURFACE IMPOUNDMENT DATA

Legend For Figure G-1

1. SIA data.
2. Jacobs Engineering Co. "Assessment of Hazardous Waste Practices in the Petroleum Refining Industry." Final Report to U.S. EPA, Office of Solid Waste, Contract 68-01-2288, June 1976.
3. Lowenheim, F.A. and M.K. Moore. Industrial Chemicals, Wiley-Interscience, N.Y., 1975.
4. Foster D. Snell, Inc. "Assessment of Industrial Hazardous Waste Practices — Rubber and Plastics Industry: Appendices." Final Report to U.S. EPA, Office of Solid Waste, Contract 68-01-3194, March 1978.
5. Arthur D. Little, Inc. "Pharmaceutical Industry: Hazardous Waste Generation, Treatment, and Disposal." Report to U.S. EPA, Contract 68-01-2684, 1976.
6. Wapora, Inc. "Assessment of Industrial Hazardous Waste Practices: Paint and Allied Products Industry, Contract Solvent Reclaiming Operations, and Factory Applications of Coatings." Prepared for U.S. EPA, Contract 68-01-2656, 1976.
7. Temple, Barker & Sloane, Inc.
8. Swain, John W., Jr. "Assessment of Industrial Hazardous Waste Management Practices: Petroleum Re-refining Industry (SIC 2992)." Prepared for U.S. EPA, Office of Solid Waste, September 1978.
9. Foster D. Snell, Inc. "Assessment of Industrial Hazardous Waste Practices, Rubber and Plastics Industry: Chapter III, Rubber Products Industry (SIC 30)." Prepared for U.S. EPA, Office of Solid Waste Management, Contract 68-01-3194, March 1978.
10. Arthur D. Little, Inc.
11. Development Planning and Research Associates, Inc.
12. Pope-Reid Associates, Inc.
13. Sverdrup & Parcel, Inc.
14. Battelle Columbus Laboratories. "Assessment of Industrial Hazardous Waste Practices — Electroplating and Metal Finishing Industries Job Shops." Final Report to U.S. EPA, Office of Solid Waste, Hazardous Waste Management Division, Contract 68-01-4360, May 1978.
15. Wapora, Inc. "Assessment of Industrial Hazardous Waste Practices: Electronic Components Manufacturing Industry." Prepared for U.S. EPA, Office of Solid Waste, Hazardous Waste Management Division, Contract 68-01-3193, January 1977.
16. Cantrell, A. "Annual Refinery Survey," Oil and Gas Journal, March 24, 1980.
17. Arthur D. Little, Inc., unpublished industry characterizations.

- EPA re-evaluated all surface impoundments with areas of 50 acres or more individually because of their potential impact on costs. Several impoundments that had been reported in the SIA data base as receiving hazardous waste were found not to be receiving such waste.* Others were found to be listed under an incorrect SIC number and were moved to the proper code.** Adjustments were made to the data base accordingly.
- When the SIA data reported impoundments having "0.00 acres" of surface area, those impoundments were not used in calculating the average area.
- This methodology defines all model plants on the 4-digit level of the SIC code. Most of the SIA data base is also listed on the 4-digit level. Some plants, however, had not been reported in the SIA by the 4-digit code. Because they would have been omitted from this analysis, Arthur D. Little, Inc., assigned them to the appropriate 4-digit classifications on a pro-rata basis.

Calculation of the surface impoundment specifications for the wood preserving industry (SIC 2491) used this methodology. The SIA data base indicates that 9 plants have disposal impoundments that receive hazardous waste and 42 have treatment/storage impoundments. By applying the modifications discussed above, 10 plants were calculated to have disposal impoundments that receive hazardous waste and 53 to have treatment/storage impoundments.

The second methodology uses published industry characterizations to determine the number of plants with surface impoundments. Some of these sources provided only general information about a given industry; others provided specific information. Much of this information results from other EPA-sponsored investigations, such as the Hazardous Waste Assessment Reports (see Figure G-1).

In the third methodology, industry experts prepared the surface impoundment specifications for some industries or commented on the "reasonableness" of the specification for other industries.

The fourth methodology was to conduct a limited survey of an industry or industry segment under the scope of this project that allowed the calculation of the number of actual plants represented by each model plant in the industry that have surface impoundments. For example, where the SIC code covers a number of products, it is not possible to identify the surface impoundments listed in the SIC data base as associated with a given industry segment. (The non-cellulosic man-made segment is within the plastic materials, synthetic rubbers, and synthetic fibers industry.) For such cases, the SIA comprehensive listing was compared with a list of manufacturers to determine which plants have impoundments. Since both the SIA comprehensive listing and published lists of manufacturing plants** identify actual

*Internal memoranda, Paul Cassidy, EPA Disposal Branch, 7/8/80 and 7/23/80.

**For the non-cellulosic man-made segment, for example, the reference was: Faith, Keys and Clark, *Industrial Chemicals*, Wiley-Interscience, 1975.

plants and locations, a plant-by-plant comparison of the lists shows the number of plants in these industry segments that have surface impoundments.

(2) Calculation of Distribution by Size of Plant

Two approaches were used to assign surface impoundments to plants with different production rates. In the first approach, all plants within an industry, represented by all model plant sizes and all locations, are assumed to be equally likely to have surface impoundments. Therefore, when the percentage of plants with impoundments in an industry segment was calculated, that same percentage was applied to each model. (The percentage is calculated by dividing the number of plants with impoundments by the total number of plants in the industry segment.) This calculation was carried out separately for both treatment/storage and disposal impoundments.

A second approach was a census of the industry independent of the SIA data base. In the case of leather tanning and finishing, for example, almost every plant was contacted, and its size, location, and use of surface impoundments were correlated; the tabulated results should be an accurate representation of the industry.

(3) Calculation of Number of Impoundments per Site

There are two methods for calculating the number of impoundments per plant — use of the SIA data base or an independent census of the industry. Taking the number of impoundments from the SIA data base assumes that all plants, independent of size or location, have that number of impoundments. This assumption is based on the rationale that all plants within an industry segment have similar needs for surface impoundments. If a plant needs two treatment impoundments, e.g., for aeration and settling, this report assumes that all plants represented by the model also need two. Since the number of required impoundments is more a function of plant processing than size, it is assumed that all model plant sizes within an industry or industry segment have the same number of surface impoundments (by type) per plant.

Using independent industry survey data, the surface impoundment descriptions are tabulated for each plant individually and the average number per site is calculated for the model.

(4) Calculation of Surface Area per Plant

Again there are two methods — one that relies heavily on the SIA data base, and the other that uses the independent industry surveys.

The first method assumes that the specific disposal rate (MT/acre-yr) is constant for all model plants within one industry or industry segment. Therefore, the surface area of the impoundments for each plant represented by the model is proportional to the quantity of waste generated.

The second method relies upon the independent industry surveys undertaken by other EPA contractors for the high impact industries. A list of the sources used to develop model plants for the high impact industries follows:

- Industries listed in Table G-1

1. Sverdrup and Parcel, Inc., "Major Nonferrous Metals," Technical study report BATEA/NFPS/PSES/PSNS, April 1979.
2. PEDCO Environmental, Inc., "Assessment of Solid Waste Management Problems and Practices in Nonferrous Smelters," March 1979.
3. Calspan Corp., "Assessment of Industrial Hazardous Waste Practices in the Metal Smelting and Refining Industry," Report to U.S. EPA. Office of Solid Waste, Contract 68-01-2604, April 1977.
4. Mineral Industry Survey, U.S. Bureau of Mines.
5. Development Planning and Research Associates, Inc., "Economic Impact Assessment of Proposed Effluent Limitation Guidelines, New Source Performance Standards, and Pretreatment Standards for Leather Tanning and Finishing Point Source Category," July 1979.
6. Jacobs Engineering Co. "Draft Development Document Including the Data Base for the Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Inorganic Chemicals Manufacturing Point Source Category," April 1979.

- Industries listed in Table G-2

1. Chemical Products Synopsis, a reporting service of Mansville Chemical Products, Mansville, NY.
2. "Chemical Profile." Chemical Marketing Reporter, Schnell Publishing Company.
3. SRI 1979 Directory of Chemical Producers, SRI International.
4. EIS Industrial Plants, a computer data service of Economic Information Systems, Inc.
5. Synthetic Organic Chemicals, 1978, USITC Publication 1,001.

- Industries listed in Table G-3

1. County Business Patterns, 1977, U.S. Department of Commerce, Bureau of the Census.
2. Arthur D. Little, Inc., Table V-38, "Draft Economic Impact Analysis, Subtitle C, Resource Conservation and Recovery Act 1976," prepared for EPA, Office of Solid Waste, January 1979.

- Industries listed in Table G-5

1. Energy Resources Company, "Economic Impact Analysis of Waste Management Regulations on Selected Generating Industries," December 1978.
2. Catalytic, Inc., "BPT Evaluation of the Organic Chemicals, Plastics, and Synthetics Industries."
3. Energy Resources Company, "Economic Impact Analysis of Hazardous Waste Regulations on Industrial Organic Chemicals, Pesticides, and Explosives."
4. TRW, Inc., "Assessment of Industrial Hazardous Waste Practices — Organic Chemicals, Pesticides, and Explosives Industries."
5. Chemical Marketing Reporter.
6. Hydrocarbon Processing.
7. Chemical Week.
8. Oil and Gas Journal, Annual Refining Issue.
9. 1978 Directory of the National Barrel and Drum Association (NBDA).

3. MODEL PLANT DATA

This section presents the industrial model plant specifications used in calculating compliance costs and, for the six high impact industries, the economic impact results. Each part contains three sets of tables

- model plant specifications
- small waste generator categories
- surface impoundment specifications

The total hazardous waste columns of the model plant specifications contain rounded off entries and do not match precisely the segment totals shown in the

waste generation tables and industry totals presented in Chapter IV. The number of model plants listed for the six high impact industries omits a few plants without any hazardous waste streams. This editorial treatment creates a small discrepancy between the industry totals herein and those used in the main text.

a. THE AGRICULTURAL SERVICES INDUSTRY

MODEL PLANT SPECIFICATIONS
AGRICULTURAL SERVICES INDUSTRY
 Industry Segment: Custom Applicators
 SIC 0711, 0721, 0729

Model	Acres Treated (Million)	Hazardous Waste per "Plant" (MT)	No. "Plants" ^a Represented		Total 1978 Acres Treated by "Plants" Represented (Million)	Total Hazardous Waste from "Plants" Represented (MT)
			R	NR		
Large	-	-	0	0	-	-
Medium	0.16	225	130	170	44	67,000
Small	0.02	27	5,200	6,900	211	327,000
SWG ^b	0.004	7	4,400	5,900	45	72,000
Total	-	-	9,730	12,970	300	466,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based on employment and plant size distribution from *County Business Patterns*, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE AGRICULTURAL SERVICES INDUSTRY

**Industry Segment: Custom Applicators
SIC 0711, 0721**

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	500	470
Less than 500 kg/month	6,500	33,000
Less than 1000 kg/month	10,300	70,000
Greater than 1000 kg/month	12,400	400,000
Total	22,700	470,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

AGRICULTURAL SERVICES INDUSTRY

Industry Segment: Agricultural Services - Custom Applicators

SIC 0711, 0721

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant
Large							
Regulated							
Non-Regulated							
Medium							
Regulated	130						
Non-Regulated	170						
Small							
Regulated	5200						
Non-Regulated	6900						
SWG							
Regulated	4400						
Non-Regulated	5900						

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

b. THE TEXTILE MANUFACTURING INDUSTRY

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Wool Finishing - Direct
 SIC 2231

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Large	12.0	1,600	0	1	1.19	14	1,900
Medium	4.5	580	0	1	1.19	5.4	700
Small	2.0	350	1	8	1.19	21	3,800
Total	-	-	1	10	-	40	6,400

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc.; Sverdrup & Parcel and Associates, Inc.; and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Wool Finishing - Indirect
 SIC 2231

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Large	11	1,800	0	1	1.19	14	1,900
Medium	5.1	710	1	3	1.19	24	3,400
Small	0.8	110	0	21	1.19	19	2,900
Total	-	-	1	25	-	57	8,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Simple - Direct
 SIC 2251

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	31	2,800	0	6	0.57	110	9,500
Medium	6.0	580	0	15	0.57	51	5,000
Small	1.5	2,800	2	13	0.57	13	900
Total	-	-	2	34	-	170	15,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Simple - Indirect
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	6.8	260	2 11	0.57	50	1,900
Medium	3.6	160	3 20	0.57	47	1,900
Small	1.3	52	10 21	0.57	50	920
Total	-	-	15 52	-	120	4,700

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Source: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Complex -- Direct
 SIC 2251

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	11	1,500	2	2	0.57	25	3,400
Medium	6.3	610	0	4	0.57	14	1,400
Small	2.4	140	0	5	0.57	6.8	300
Total	-	-	2	11	-	46	5,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Field Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Complex - Indirect
 SIC 2251

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Large	17.0	460	0	3	0.57	29	780
Medium	6.4	180	0	6	0.57	22	610
Small	0.5	12	0	2	0.57	0.57	13
Total	-	-	0	11	-	52	1,400

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Hosiery - Direct
 SIC 2251

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Medium	1.6	98	0	1	0.57	0.9	56
Small	0.64	100	0	7	0.57	2.8	410
Total	-	-	0	8	-	3.5	470

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Knit Hosiery -- Indirect
 SIC 2251

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Medium	2.6	72	0	3	0.57	4.4	120
Small	0.64	16	2	48	0.57	18	470
Total	-	-	2	51	-	22	590

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Woven Simple - Direct
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	16	1,400	1	8	0.49	71	6,300
Medium	7	650	1	12	0.49	45	4,100
Small	1.2	120	3	21	0.40	14	1,400
Total	—	—	5	41	—	130	12,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Woven Simple - Indirect
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	12	350	R	NR	0.49	64	1,800
			1	10			
Medium	2.9	95	7	25	0.49	45	1,500
Small	0.41	14	3	18	0.49	4.2	150
Total	-	-	11	53	-	110	3,600

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Woven - Complex - Direct
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	46	4,600	0 1	0.49	22	2,200
Medium	29	2,700	1 7	0.49	110	11,000
Small	6.3	630	0 5	0.49	15	1,500
Total	-	-	1 13	-	150	15,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

**MODEL PLANT MANUFACTURING SPECIFICATIONS
TEXTILE INDUSTRY**

Industry Segment: Woven Complex -- Indirect
SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	33	1,800	0	9	0.49	97	5,300
Medium	5.5	260	0	7	0.49	19	890
Small	2.3	100	1	6	0.49	11	510
Total	—	—	1	22	—	130	6,700

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc.; Sverdrup & Parcel and Associates, Inc.; and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Woven Complex Plus Dyeing - Direct
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	46	15,000	0 11	0.49	250	80,000
Medium	12.0	3,700	0 13	0.49	76	23,000
Small	4.8	1,500	0 11	0.49	25	8,200
Total	-	-	0 35	-	360	110,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Woven Complex Plus Dyeing - Indirect
 SIC 2261

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	43	2,400	0 2	0.49	42	2,300
Medium	12	800	0 5	0.49	29	2,000
Small	5.1	340	0 5	0.49	12	830
Total	-	-	0 12	-	83	5,100

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Stock and Yarn - Direct
 SIC 2269

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Extra Large	12	810	0	5	0.84	52	3,400
Large	10	600	0	6	0.84	50	3,000
Medium	5.5	250	0	6	0.84	28	1,300
Small	2.2	120	2	20	0.84	41	2,200
Total	-	-	2	37	-	170	9,900

G-36

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
Industry Segment: Stock and Yarn — Indirect
SIC 2269

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	5.3	188	0 23	0.84	100	3,600
Medium	2.0	64	0 15	0.84	25	800
Small	0.91	28	5 35	0.84	<u>31</u>	<u>930</u>
Total	—	—	5 73	—	160	5,300

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc.; Sverdrup & Parcel and Associates, Inc.; and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Carpet - Direct
 SIC 2272

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	29	4,300	0	2	0.73	42	6,300
Medium	9.3	900	0	5	0.73	34	3,300
Small	4.2	500	0	6	0.73	18	2,200
Total	-	-	0	13	-	94	12,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Carpet - Indirect
 SIC 2272

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Large	27	54	0	1	0.73	20	39
Medium	11	21	1	2	0.73	24	46
Small	1.9	4	1	2	0.73	4	8.8
Total	-	-	2	5	-	84	94

Q39

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Felted Fabric - Direct
 SIC 2291

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Medium	0	0	0	0	1.00	0	0
Small	0.14	0.3	0	<u>1</u>	0.54	<u>0.08</u>	<u>0.16</u>
Total	-	-	0	1	-	0.08	0.16

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
Industry Segment: Felted Fabric - Indirect
SIC 2281

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Medium	2.2	4.3	0	1	0.54	1.2	2.32
Small	0.82	1.6	0	<u>1</u>	0.54	<u>0.44</u>	<u>0.86</u>
Total	--	--	0	2	-	1.6	3.2

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Nonwoven - Direct
 SIC 2297

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Medium	-	-	-	-	-	-	-
Small	2.4	31	0	2	1.76	8.4	110
Total	-	-	0	2	-	8.4	110

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
 Industry Segment: Nonwoven -- Indirect
 SIC 2297

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	—	—	0	—	—	—
Medium	5.4	11	0 1	0.84	4.5	9.2
Small	2.2	4.3	0 3	1.76	12	23
Total	—	—	0 4	—	16	32

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

MODEL PLANT SPECIFICATIONS
TEXTILE MANUFACTURING INDUSTRY
Industry Segment: Wool Scouring - Indirect
SIC 2299

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Medium	-	-	-	-	-	-
Small	3.2	6.2	0 1	0.99	3.2	6.2
Total	-	-	0 1	-	3.2	6.2

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Sverdrup & Parcel and Associates, Inc., and Development Planning & Research Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Knit Simple - Indirect
SIC 2261

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	19	51
Less than 1000 kg/month	24	88
Greater than 1000 kg/month	43	4600
Total	67	4700

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Knit Complex - Indirect
SIC 2251

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	1	0.57
Less than 500 kg/month	1	0.57
Less than 1000 kg/month	4	16
Greater than 1000 kg/month	7	1400
Total	11	1400

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Knit Hosiery - Direct
SIC 2251

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	0	0
Less than 1000 kg/month	0	0
Greater than 1000 kg/month	8	470
Total	8	470

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Knit Hosiery - Indirect

SIC 2251

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	18	11
Less than 500 kg/month	19	14
Less than 1000 kg/month	19	14
Greater than 1000 kg/month	34	580
Total	53	590

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Woven Simple - Indirect
SIC 2261

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	6	2.4
Less than 500 kg/month	15	27
Less than 1000 kg/month	32	320
Greater than 1000 kg/month	32	3300
Total	64	3600

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Woven Complex -- Indirect
SIC 2261

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	5	17
Less than 1000 kg/month	5	17
Greater than 1000 kg/month	18	6700
Total	23	6700

Sources: Pope-Reid Associates, Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Woven Complex Plus Desizing -- Indirect
SIC 2261

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	2	9.8
Less than 1000 kg/month	4	33
Greater than 1000 kg/month	8	5100
Total	12	5100

Sources: Pope-Reid Associates, Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Stock and Yarn — Indirect
SIC 2269

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants In Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	13	25
Less than 1000 kg/month	19	77
Greater than 1000 kg/month	59	5200
Total	78	5300

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE MANUFACTURING INDUSTRY

Industry Segment: Carpet — Indirect
SIC 2272

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	3	7.9
Less than 1000 kg/month	3	7.9
Greater than 1000 kg/month	4	86
Total	7	94

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE INDUSTRY

Industry Segment: Felted Fabric - Direct
SIC 2291

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	1	0.16
Less than 500 kg/month	1	0.16
Less than 1000 kg/month	1	0.16
Greater than 1000 kg/month	0	0
Total	1	0.16

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE INDUSTRY

Industry Segment: Felted Fabric - Indirect

SIC 2291

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	1	0.86
Less than 500 kg/month	2	3.2
Less than 1000 kg/month	2	3.2
Greater than 1000 kg/month	0	0
Total	2	3.2

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE TEXTILE INDUSTRY

Industry Segment: Nonwoven - Indirect
SIC 2297

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	0	0
Less than 1000 kg/month	4	32
Greater than 1000 kg/month	0	0
Total	4	32

Sources: Pope-Reid Associates Inc., Development Planning and Research Associates, Inc., and
Sverdrup & Parcel and Associates, Inc. estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Wool Finishing — Direct
SIC 2231

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
		No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	1	0	0	0	0	0	0
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	0	0	0	1	1	0.92	0.92
Small							
• Regulated	0	0	1	0	0	0	0
• Non-Regulated	4	0	2	2	1	0.37	0.74
SWG ^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc., and Sverdrup and Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS **TEXTILE INDUSTRY**

Industry Segment: Wool Finishing -- Indirect
SIC 2231

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundment
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
Large							
● Regulated ^a	0	0	0	0	0	0	0
● Non-Regulated ^a	1	0	0	0	0	0	0
Medium							
● Regulated	1	0	0	0	0	0	0
● Non-Regulated	3	0	0	0	0	0	0
Small							
● Regulated	0	0	0	0	0	0	0
● Non-Regulated	18	0	3	0	0	0	0.16
SWG ^b							
● Regulated	—	—	—	—	—	—	—
● Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc., and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit - Simple - Direct

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	2	0	3	1	1	2.8	8.5
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	5	0	5	5	1	2.2	1.4
Small							
• Regulated	0	0	0	2	1	2	0.30
• Non-Regulated	4	0	6	3	1	2.7	0.40
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit - Simple - Indirect

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	2	0	0	0	0	0	0
• Non-Regulated ^a	8	0	3	0	0	0	0.30
Medium							
• Regulated	3	0	0	0	0	0	0
• Non-Regulated	16	0	4	0	0	1	0.18
Small							
• Regulated	10	0	0	0	0	0	0
• Non-Regulated	15	0	6	0	0	1	0.08
SWG ^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit - Complex - Direct

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage		Disposal Impoundments		Treatment/Storage Impoundments	
			No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	1	0	0	1	1	0.62	0.62	
● Non-Regulated	0	0	1	1	1	0.62	0.93	
Medium								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	2	0	1	1	1	0.37	0.56	
Small								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	2	0	1	2	1	0.15	0.20	
SWG ^b								
● Regulated	—	—	—	—	—	—	—	
● Non-Regulated	—	—	—	—	—	—	—	

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit - Complex - Indirect

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Treatment/Storage			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	0	0	0	0	0	0	0	
● Non-Regulated ^a	1	0	2	0	0	0	0.46	
Medium								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	2	0	4	0	0	0	0.18	
Small								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	1	0	1	0	0	0	0.02	
SWG ^b								
● Regulated	-	-	-	-	-	-	-	
● Non-Regulated	-	-	-	-	-	-	-	

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit - Hosiery - Direct

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large							
• Regulated ^a	-	-	-	-	-	-	-
• Non-Regulated ^a	-	-	-	-	-	-	-
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	1	0	0	0	0	0	0
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	5	0	2	0	0	0	0.03
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Knit — Hosiery — Indirect

SIC 2251

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	—	—	—	—	—	—	—
• Non-Regulated ^a	—	—	—	—	—	—	—
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	2	0	1	0	0	1	0.08
Small							
• Regulated	2	0	0	0	0	0	0
• Non-Regulated	40	0	8	0	0	1	0.02
SWG ^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS*

TEXTILE INDUSTRY

Industry Segment: Woven - Simple - Direct

SIC 2261

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
• Regulated ^a	1	0	0	0	0	0	0
• Non-Regulated ^a	4	0	3	1	1	0.92	1.6
Medium							
• Regulated	1	0	0	0	0	0	0
• Non-Regulated	6	0	5	1	1	0.37	0.88
Small							
• Regulated	3	0	0	0	0	0	0
• Non-Regulated	10	0	9	2	1	0.07	0.13
SWG ^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Woven - Simple - Indirect

SIC 2261

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	1	0	0	0	0	0	0
• Non-Regulated ^a	8	0	2	0	0	0	0.60
Medium							
• Regulated	7	0	0	0	0	0	0
• Non-Regulated	21	0	3	1	1	1.8	0.14
Small							
• Regulated	2	0	0	0	0	0	0
• Non-Regulated	15	0	2	1	1	1.7	0.033
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reld Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Woven Complex - Direct

SIC 2261

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large							
● Regulated ^a	0	0	0	0	0	0	0
● Non-Regulated ^a	0	0	0	1	1	1	3.1
Medium							
● Regulated	0	0	0	1	1	1	1.8
● Non-Regulated	1	0	2	4	1	1.3	2.5
Small							
● Regulated	0	0	0	0	0	0	0
● Non-Regulated	0	0	2	3	1	1.4	0.52
SWG ^b							
● Regulated	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Woven — Complex — Indirect
SIC 2261

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	0	0	0	0	0	0	0	0
● Non-Regulated ^a	4	0	2	0	0	0	1	0.92
Medium								
● Regulated	0	0	0	0	0	0	0	0
● Non-Regulated	4	0	3	0	0	0	1	0.18
Small								
● Regulated	1	0	0	0	0	0	0	0
● Non-Regulated	5	0	4	0	0	0	1	0.08
SWG ^b								
● Regulated	—	—	—	—	—	—	—	—
● Non-Regulated	—	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Woven — Complex and Desizing — Direct

SIC 2281

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	1	0	10	0	0	0	9.2
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	2	0	11	0	0	3	2.7
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	2	0	9	0	0	3	1.1
SWG^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Woven -- Complex and Desizing -- Indirect

SIC 2261

Model	No. of Plants With No. Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	1	0	1	0	0	2	3.1
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	4	0	1	0	0	2	0.92
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	4	0	1	0	0	0	0.36
SWG^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Stock and Yarn -- Direct

SIC 2269

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments		Plants With		
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Extra-Large											
● Regulated ^a	0	0	0	0	0	0	0	0	0	0	0
● Non-Regulated ^a	1	0	4	0	0	0	0	0	2	1.8	0
Large											
● Regulated	0	0	0	0	0	0	0	0	0	0	0
● Non-Regulated	2	0	4	0	0	0	0	0	2	1.2	0
Medium											
● Regulated	0	0	0	0	0	0	0	0	0	0	0
● Non-Regulated	1	1	4	0	1	1.0	1	1.0	2	0.74	0
Small											
● Regulated	1	0	1	0	0	0	0	0	2	0.30	0
● Non-Regulated	6	0	14	0	0	0	0	0	1.9	0.29	0

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

TEXTILE INDUSTRY

Industry Segment: Stock and Yarn — Indirect
SIC 2269

a. Plants located in states with or without regulations similar to RCRA.

h. **Small Waste Generator:** a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Carpet -- Direct

SIC 2272

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	0	0	0	0	0	0	0	
● Non-Regulated ^a	1	0	1	0	0	2	1.8	
Medium								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	1	0	4	0	0	2	0.74	
Small								
● Regulated	0	0	0	0	0	0	0	
● Non-Regulated	1	0	5	0	0	2	0.3	
SWG ^b								
● Regulated	—	—	—	—	—	—	—	
● Non-Regulated	—	—	—	—	—	—	—	

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Carpet — Indirect

SIC 2272

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	1	0	0	0	0	0	0
Medium							
• Regulated	1	0	0	0	0	0	0
• Non-Regulated	2	0	0	0	0	0	0
Small							
• Regulated	1	0	0	0	0	0	0
• Non-Regulated	2	0	0	0	0	0	0
SWG^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Felted Fabric - Direct

SIC 2291

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large							
• Regulated ^a	-	-	-	-	-	-	-
• Non-Regulated ^a	-	-	-	-	-	-	-
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	0	0	0	0	0	0	0
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	1	0	0	0	0	0	0
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Felted Fabrics — Indirect

SIC 2281

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	—	—	—	—	—	—	—	—
● Non-Regulated ^a	—	—	—	—	—	—	—	—
Medium								
● Regulated	0	0	0	0	0	0	0	0
● Non-Regulated	1	0	0	0	0	0	0	0
Small								
● Regulated	0	0	0	0	0	0	0	0
● Non-Regulated	1	0	0	0	0	0	0	0
SWG ^b								
● Regulated	—	—	—	—	—	—	—	—
● Non-Regulated	—	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Nonwoven - Direct

SIC 2297

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
• Regulated ^a	-	-	-	-	-	-	-
• Non-Regulated ^a	-	-	-	-	-	-	-
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	0	0	0	0	0	0	0
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	2	0	0	0	0	0	0
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

TEXTILE INDUSTRY

Industry Segment: Nonwoven - Indirect
SIC 2287

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	0	0	0	0	0	0	0
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	1	0	0	0	0	0	0
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	3	0	0	0	0	0	0
SWG^b							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Sverdrup and Parcel and Associates, Inc.; Development Planning and Research Associates, Inc.

c. THE WOOD PRESERVING INDUSTRY

MODEL PLANT SPECIFICATIONS
WOOD PRESERVING INDUSTRY
SIC 2491

Model	Production per Plant (Million Cubic Feet)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented	Total 1978 Production of Plants Represented (Million Cubic Feet)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
Large	-	-	-	0	0	-	-
Medium	3.7	141	47	5	62	2,400	800
Small	1.3	51	17	34	157	5,900	2,000
SWG ^b	0.3	13	4	75	108	4,100	1,300
Total	-	-	-	114	344	12,500	4,100

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based on employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE WOOD PRESERVING INDUSTRY

SIC 2491

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	100	75
Less than 500 kg/month	254	620
Less than 1000 kg/month	324	1,400
Greater than 1000 kg/month	134	2,800
Total	458	4,200

Source: Arthur D. Little, Inc., estimates.

SIC: 2491

G-82

Nonregulated plants are located in states without requirements similar to RCRA.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

d. THE INORGANIC CHEMICAL INDUSTRY

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Chlorine - Mercury Cell
SIC 2812

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
			R	NR			
Large	190	15	1	1	1.1	430	34
Medium	110	8.4	4	10	1.1	1,600	120
Small	19	1.8	7	4	2.4	550	53
Total	-	-	12	15	-	2,500	220

G-84

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Chlorine — Diaphragm Cell
SIC 2812

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
			R	NR			
Large	189	19	8	2	2.40	4,600	456
Medium	93	8.7	9	7	1.30	1,900	181
Small	19	1.8	8	5	1.70	420	40
Total	—	—	25	14	—	7,000	676

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Chrome Pigments
SIC 2816

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
Extra-Large	18.1	5.9	1	1	0.78	28	9.2
Large	6.0	2.0	1	1	1.73	21	6.9
Medium	4.0	1.3	1	2	0.265	3.2	1.0
Small	1.5	0.5	3	2	0.776	4.6	1.6
Total	—	—	6	6	—	57	19

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Titanium Dioxide - Sulfate Process
SIC 2816

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
Large	75	200	0	1	0.99	74	200
Medium	48	800	0	1	1.11	53	880
Small	32	530	0	2	1.13	72	1,200
Total	-	-	0	4	-	200	2,300

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Titanium Dioxide - Chloride Process
SIC 2816

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
Large	45	85	1 0	0.81	37	69
Medium	26	48	1 1	1.19	61	110
Small	17	32	2 1	1.3	66	120
Total	-	-	4 2	-	160	310

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Field Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Titanium Dioxide — Chloride Process Using Ilmenite Ore
 SIC 2816

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
Extra-Large	120	100	0 4	0.62	290	250
Total	—	—	0 4	—	290	250

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
Industry Segment: Sodium Dichromate
SIC 2819

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (000 MT)
Large	70	7.0	0	1	1.14	80	8.0
Medium	50	120	0	1	1.14	57	140
Small	20	51	1	0	1.14	<u>23</u>	<u>59</u>
Total	-	-	1	2	-	170	210

a. Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reld Associates, Inc., Energy & Environmental Analysts, Inc., and Jacobs Engineering Group, Inc. estimates.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Boric Acid
 SIC 2819

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	-	-	0	0	-	-
Medium	35	1,500	4	0	140	6,000
Small	-	-	0	0	-	-
SWG ^b	-	-	0	0	-	-
Total	-	-	4	0	140	6,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc. estimates. Model plant specifications based on employment and plant size distribution from County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Phosphorus Pentasulfide
 SIC 2819

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	—	—	0	0	—	—
Medium	—	—	0	0	—	—
Small	9	16	2	5	63	115
SWG ^b	3	5	0	1	3	5
Total	—	—	2	6	66	120

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based on employment and plant size distribution from County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Phosphorus Trichloride
 SIC 2819

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
				R	NR			
Large	-	-	-	0	0	-	-	-
Medium	-	-	-	0	0	-	-	-
Small	27	-	25	1	0	27	N.A.	25
SWG ^b	7.5	-	7	1	5	45	N.A.	42
Total	-	-	-	2	5	72	-	67

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based on employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE INORGANIC CHEMICAL INDUSTRY

Industry Segment: Phosphorus Pentasulfide
SIC 2819

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	1	5.5
Less than 1000 kg/month	1	5.5
Greater than 1000 kg/month	7	110
Total	8	120

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR FOR THE INORGANIC CHEMICAL INDUSTRY

Industry Segment: Phosphorus Trichloride
SIC 2819

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	2	11
Less than 1000 kg/month	6	42
Greater than 1000 kg/month	1	25
Total	7	67

Sources: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Chlorine-Mercury Cell Process
 SIC 2812

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	0	0	1	0	0	0	2	12.5
● Non-Regulated	0	1	0	0	2	12.5	0	0
Medium								
● Regulated	0	2	2	0	2	12.5	2	12.5
● Non-Regulated	2	3	4	1	2	12.5	2	12.5
Small								
● Regulated	2	3	1	1	2	12.5	2	12.5
● Non-Regulated	0	1	3	0	2	12.5	2	12.5
SWG ^b								
● Regulated	0	0	0	0	—	—	—	—
● Non-Regulated	0	0	0	0	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Field Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Chlorine - Diaphragm Cell Process

SIC 2812

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
Large							
• Regulated ^a	0	2	6	0	2	2	13
• Non-Regulated ^a	2	1	0	0	2	0	0
Medium							
• Regulated	1	0	8	0	0	2	13
• Non-Regulated	2	3	3	0	2	2	13
Small							
• Regulated	2	0	6	0	0	2	12.5
• Non-Regulated	0	3	1	0	2	2	12.5

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Chrome Pigments

SIC 2816

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
		No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant
Extra Large (4)							
• Regulated ^a	0	0	1	0	0	0	0.07
• Non-Regulated ^a	0	0	1	0	0	0	0.07
Large (3)							
• Regulated	0	0	1	0	0	0	0.07
• Non-Regulated	0	0	1	0	0	0	0.07
Medium (2)							
• Regulated	0	0	1	0	0	0	0.07
• Non-Regulated	0	0	2	0	0	0	0.07
Small (1)							
• Regulated	0	0	3	0	0	0	0.07
• Non-Regulated	0	0	2	0	0	0	0.07

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
INORGANIC CHEMICAL INDUSTRY
 Industry Segment: Titanium Dioxide - Sulfate Process
 SIC 2816

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
		No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant	No. per Plant
Large							
• Regulated ^a	0	0	0	0	0	0	0
• Non-Regulated ^a	0	0	1	0	0	0	13
Medium							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	0	0	0	1	2	5.3	8.0
Small							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	0	0	2	0	0	0	13

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Titanium Dioxide - Chloride Process

SIC 2816

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments
					No. per Plant	Surface Area/Plant (Acres)	
Large (3)							
● Regulated ^a	0	0	0	1	2	1.0	2
● Non-Regulated ^a	0	0	0	0	0	0	0
Medium (2)							
● Regulated	0	0	0	1	1	0.50	2
● Non-Regulated	0	0	0	1	1	0.50	2
Small (1)							
● Regulated	0	0	2	0	0	0	3
● Non-Regulated	0	0	1	0	0	0	3

G-100

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Titanium Dioxide - Chloride Process using Ilmenite Ore
SIC 2816

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Extra Large								
• Regulated ^a	0	0	3	0	0	0	4	2.8
• Non-Regulated ^a	0	0	0	0	0	0	0	0
Large								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-
Medium								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-
Small								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-

^a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Sodium Dichromate

SIC 2819

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	0	0	0	0	0	0	0	0
● Non-Regulated ^a	0	0	0	1	1	6.50	1	6.50
Medium								
● Regulated	0	0	0	0	0	0	0	0
● Non-Regulated	0	0	1	0	0	0	3	34
Small								
● Regulated	0	0	0	1	4	51	4	51
● Non-Regulated	0	0	0	0	0	0	0	0
SWG ^b								
● Regulated	0	0	0	0	—	—	—	—
● Non-Regulated	0	0	0	0	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc.; Energy and Environmental Analysis, Inc.; Jacobs Engineering Group, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Boric Acid

SIC 2819

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage		No. per Plant	Treatment/Storage Impoundments	
			Disposal	Both		No. per Plant	Surface Area/Plant (Acres)
Large							
Regulated							
Non-Regulated							
Medium							
Regulated	4						
Non-Regulated							
Small							
Regulated							
Non-Regulated							
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Phosphorus Pentasulfide

SIC 2819

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated								
Non-Regulated								
Medium								
Regulated								
Non-Regulated								
Small								
Regulated	2							
Non-Regulated	5							
SWG								
Regulated								
Non-Regulated	1							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

INORGANIC CHEMICAL INDUSTRY

Industry Segment: Phosphorus Trichloride

SIC 2819

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With	
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant
					Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large						
Regulated						
Non-Regulated						
Medium						
Regulated						
Non-Regulated						
Small						
Regulated	1					
Non-Regulated						
SWG						
Regulated	1					
Non-Regulated	5					

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

e. THE PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins - ABS/SAN Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	107	540	2	107	1,080
Nonregulated	107	540	1	213	540
Total	-	-	3	320	1,620
Medium					
Regulated	33	160	5	163	810
Nonregulated	33	160	3	98	490
Total	-	-	8	261	1,300
Small					
Regulated	-	-	0	-	-
Nonregulated	7.5	40	2	15	80
Total	-	-	2	15	80
SWG ^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	13	596	3,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins — Alkyd Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG ^b					
Regulated	2	0.23	73	179	17
Nonregulated	2	0.23	67	164	15
Total	—	—	140	343	32
Total	—	—	140	343	32

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins — Amino Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Small					
Regulated	26	32	3	78	97
Nonregulated	26	32	4	104	129
Total	—	—	7	182	226
SWG^b					
Regulated	2.6	3.3	74	195	242
Nonregulated	2.6	3.3	134	352	437
Total	—	—	208	547	679
Total	—	—	215	729	905

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY

Industry Segment: Plastic Materials and Resins — Coumarons-Indene Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	0	—	—
Nonregulated	66	2,400	2	131	4,700
Total	—	—	2	131	4,700
Medium					
Regulated	7	250	2	14	500
Nonregulated	—	—	0	—	—
Total	—	—	2	14	500
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total					
			4	145	5,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins - Phenolic Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	11	4,600	22	244	100,000
Nonregulated	11	4,600	19	210	87,000
Total	-	-	41	454	187,000
Medium					
Regulated	5.3	2,200	31	165	68,000
Nonregulated	5.3	2,200	48	256	108,000
Total	-	-	79	421	174,000
Small					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	120	876	361,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins — Polypropylene Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	185	870	3	555	2,610
Nonregulated	—	—	0	—	—
Total	—	—	3	555	2,600
Medium					
Regulated	65	300	9	589	2,700
Nonregulated	82	370	3	246	1,100
Total	—	—	12	835	3,800
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	15	1,390	6,400

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Plastic Materials and Resins - Polystyrene Resins
SIC 2821

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	94	760	5	470	3,800
Nonregulated	120	1,000	2	240	2,000
Total	-	-	7	710	5,800
Medium					
Regulated	57	470	7	400	3,300
Nonregulated	47	380	9	420	3,400
Total	-	-	16	820	6,700
Small					
Regulated	14	110	8	110	870
Nonregulated	18	145	5	90	750
Total	-	-	13	200	1,600
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	38	1,730	14,100

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

**MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Polybutadiene Rubber
SIC 2822**

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	78	8	4	315	32
Nonregulated	45	4	1	45	4
Total	—	—	5	360	36
Total	—	—	5	360	36

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: SB Rubber
 SIC 2822

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	318	1,900	2	632	3,800
Nonregulated	—	—	0	—	—
Total	—	—	2	632	3,800
Medium					
Regulated	103	620	6	621	3,700
Nonregulated	107	700	1	107	700
Total	—	—	7	728	4,400
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	9	1,360	8,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Cellulosic Man-Made Fibers - Rayon
SIC 2823

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	0	—	—
Nonregulated	110	21,900	3	329	65,600
Total	—	—	3	329	65,900
Medium					
Regulated	—	—	0	—	—
Nonregulated	59	11,800	1	59	11,800
Total	—	—	1	59	11,800
Small					
Regulated	—	—	0	—	—
Nonregulated	23	4,600	1	23	4,600
Total	—	—	1	23	4,600
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	5	411	82,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
PLASTIC MATERIALS, SYNTHETIC RUBBERS,
AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Noncellulosic Man-made Fibers - Acrylics
SIC 2824

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	0	—	—
Nonregulated	127	25,000	1	127	25,000
Total	—	—	1	127	25,000
Medium					
Regulated	—	—	0	—	—
Nonregulated	59	12,000	3	177	36,000
Total	—	—	3	177	36,000
Small					
Regulated	—	—	0	—	—
Nonregulated	23	4,600	2	46	9,200
Total	—	—	2	46	9,200
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	6	350	70,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS

PLASTIC MATERIALS, SYNTHETIC RUBBERS AND SYNTHETIC FIBERS INDUSTRY

Industry Segment: Synthetic Rubber — Neoprene

SIC 2822

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	105	6300	0	—	—
Nonregulated ^a	—	—	1	105	6300
Total	—	—	1	105	6300
Medium					
Regulated	28	1700	2	56	3400
Nonregulated	—	—	0	—	—
Total	—	—	2	56	3400
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG ^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total			3	160	9700

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

**SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY**
Industry Segment: Plastic Materials and Resins -- Alkyd Resins
SIC 2821

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	140	32
Less than 500 kg/month	140	32
Less than 1000 kg/month	140	32
Greater than 1000 kg/month	0	-
Total	140	32

Sources: Arthur D. Little, Inc., estimates.

**SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY**

Industry Segment: Plastic Materials and Resins -- Amino Resins
SIC 2821

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	208	679
Less than 1000 kg/month	208	679
Greater than 1000 kg/month	7	226
Total	215	905

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
Industry Segment: Synthetic Rubber — Polybutadiene Rubber
SIC 2822

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	—
Less than 500 kg/month	1	4
Less than 1000 kg/month	5	36
Greater than 1000 kg/month	0	—
Total	5	36

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastic Materials and Resins - ABS/SAN Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundment No. per Plant
Large							
Regulated	2						
Non-Regulated	1						
Medium							
Regulated	4		1				4.00
Non-Regulated	2		1				4.00
Small							
Regulated							
Non-Regulated	2						
SM6							
Regulated							
Non-Regulated							

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Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastic Materials and Resins — Alkyd Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		Treatment/Storage Impoundments		Surface Area/Plant (Acres)
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Large									
Regulated									
Non-Regulated									
Medium									
Regulated									
Non-Regulated									
Small									
Regulated									
Non-Regulated									
SWG									
Regulated	58		15				4.00	.10	
Non-Regulated	53		14				4.00	.10	

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastics Materials and Resins — Amino Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With	
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	
					No. per Plant	Surface Area/Plant (Acres)
Large						
Regulated						
Non-Regulated						
Medium						
Regulated						
Non-Regulated						
Small						
Regulated	2		1			
Non-Regulated	3		1			
SMG						
Regulated	59		15		4.00	.60
Non-Regulated	106		28		4.00	.80
					4.00	.10
					4.00	.10

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastics Materials and Resins - Coumarone - Indene Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
Regulated							
Non-Regulated	2						
Medium							
Regulated							
Non-Regulated	2						
Small							
Regulated							
Non-Regulated							
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastics Materials and Resins — Phenolic Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large							
Regulated	16		3	3	3.00	23.50	100.40
Non-Regulated	13		3	3	3.00	20.50	87.30
Medium							
Regulated	22		6	3	3.00	16.00	45.50
Non-Regulated	34		11	3	3.00	24.90	45.60
Small							
Regulated							
Non-Regulated							
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastic Materials and Resins - Polypropylene Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large Regulated	3							
Non-Regulated								
Medium								
Regulated	7		2				4.00	14.60
Non-Regulated	2		1				4.00	12.00
Small								
Regulated								
Non-Regulated								
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Plastics Materials and Resins - Polystyrene Resins
 SIC 2821

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		Treatment/Storage Impoundments		Disposal Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated	4		1				4.00	28.40		
	2									
Medium Regulated	6		1				4.00	24.60		
	7		2				4.00	12.80		
Small Regulated	7		1				4.00	6.60		
	4		1				4.00	5.60		
SWG										
Regulated										
Non-Regulated										

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Synthetic Rubber - Neoprene
 SIC 2822

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With	
		Disposal	Treatment/ Storage	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant
				Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large					
Regulated					
Non-Regulated	1				
Medium					
Regulated					
Non-Regulated	2				
Small					
Regulated					
Non-Regulated					
SUG					
Regulated					
Non-Regulated					

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY

Industry Segment: Synthetic Rubber - Polybutadiene

SIC 2822

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated								
Non-Regulated								
Medium Regulated								
Non-Regulated								
Small Regulated								
Non-Regulated								
SWG Regulated	4							
Non-Regulated	1							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Synthetic Rubber - SBR
 SIC 2822

	Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
			Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large									
	Regulated	2							
	Non-Regulated								
Medium									
	Regulated	6							
	Non-Regulated	1							
Small									
	Regulated								
	Non-Regulated								
SWG									
	Regulated								
	Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Cellulosic Man-Made Fibers - Rayon
 SIC 2823

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large Regulated Non-Regulated			1	2	1.00	3.00	.30
Medium Regulated Non-Regulated			1			2.00	.20
Small Regulated Non-Regulated			1			2.00	.20
SWG Regulated Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PLASTIC MATERIALS, SYNTHETIC RUBBERS, AND SYNTHETIC FIBERS INDUSTRY
 Industry Segment: Noncellulosic Man-Made Fibers - Acrylics
 SIC 2824

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large Regulated Non-Regulated			1				4.00
Medium Regulated Non-Regulated			3				4.00
Small Regulated Non-Regulated			2				3.00
SWG Regulated Non-Regulated							5.10
						22.40	
						10.70	

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

f. THE PHARMACEUTICAL INDUSTRY

MODEL PLANT SPECIFICATIONS
PHARMACEUTICAL INDUSTRY
Industry Segment: Biological Products
SIC 2831

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	N.A.	1,970	90	1	3	N.A.	7,860	360
Medium	-	-	-	0	0	-	-	-
Small	-	-	-	0	0	-	-	-
SWG ^b	-	24	1.1	102	198	N.A.	7,240	340
Total	-	-	-	103	201	-	15,100	700

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
PHARMACEUTICAL INDUSTRY
 Industry Segment: Pharmaceuticals, Medicinals and Botanicals
 SIC 2833

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	3.07	800	5,500	5	9	43	11,200	77,000
Medium	.28	71	480	23	46	19	4,900	34,000
Small	.021	6	42	32	64	2	580	4,000
Total	-	-	-	60	119	64	16,700	115,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
PHARMACEUTICAL INDUSTRY
 Industry Segment: Pharmaceutical Preparations
 SIC 2834

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented R NR	Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
SWG ^b	N.A.	167	0.79	333 424	N.A.	126,000	600
Total	-	-	-	333 424	-	126,000	600

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PHARMACEUTICAL INDUSTRY

Industry Segment: Biological Products
SIC 2831

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	166	76
Less than 500 kg/month	270	230
Less than 1000 kg/month	300	340
Greater than 1000 kg/month	4	360
Total	304	700

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PHARMACEUTICAL INDUSTRY

**Industry Segment: Pharmaceutical Preparations
SIC 2834**

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	641	90
Less than 500 kg/month	700	220
Less than 1000 kg/month	757	600
Greater than 1000 kg/month	0	-
Total	757	600

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

PHARMACEUTICAL INDUSTRY

Industry Segment: Biological Products

SIC 2831

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1							
Non-Regulated	3							
Medium								
Regulated								
Non-Regulated								
Small								
Regulated								
Non-Regulated								
SWG								
Regulated	100		1	1	1.00	.50	6.00	3.00
Non-Regulated	196		1	1	1.00	1.00	6.00	9.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

PHARMACEUTICAL INDUSTRY

Industry Segment: Medicinals and Botanicals

SIC 2833

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large Regulated Non-Regulated	5		1				
	8						
Medium Regulated Non-Regulated	21		2				
	41		4	1	3.00	5.70	5.00
Small Regulated Non-Regulated	29		3				
	57		6	1	3.00	.70	5.00
SWG Regulated Non-Regulated							

64.90

7.30

5.90

.60

.50

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

PHARMACEUTICAL INDUSTRY

Industry Segment: Pharmaceutical Preparations

SIC 2834

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated								
Non-Regulated								
Medium								
Regulated								
Non-Regulated								
Small								
Regulated								
Non-Regulated								
SWG								
Regulated	319		12	2	2.00	5.30	3.00	9.40
Non-Regulated	406		15	3	2.00	4.50	3.00	9.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

g. THE PAINT AND ALLIED PRODUCTS INDUSTRY

**MODEL PLANT SPECIFICATIONS
PAINT AND ALLIED PRODUCTS INDUSTRY
SIC 2851**

Model	Production per Plant (million liters)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented R NR	Total 1978 Production of Plants Represented (million liters)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
Large	22	328	620	23 22	975	14,800	28,000
Medium	6.1	92	170	153 147	1,814	27,500	52,000
Small	1.2	19	36	385 370	938	14,300	27,000
SWG ^b	0.23	3.5	7.5	204 196	92	1,400	3,000
Total	—	—	—	765 735	3,819	58,000	110,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PAINT AND ALLIED PRODUCTS INDUSTRY

SIC 2851

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	230	960
Less than 1000 kg/month	400	2,700
Greater than 1000 kg/month	1,100	110,000
Total	1,500	110,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PAINT AND ALLIED PRODUCTS INDUSTRY
SIC 2851

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated Non-Regulated	14		4	5	2.00	.40	2.00	6.00
	13		4	5	2.00	.40	2.00	5.80
Medium Regulated Non-Regulated	150		1	2	2.00	.20	2.00	4.20
	144		1	2	2.00	.20	2.00	4.00
Small Regulated Non-Regulated	383		1	1	2.00	.20	2.00	2.10
	368		1	1	2.00	.20	2.00	2.00
SWG Regulated Non-Regulated	203			1	2.00	.10	2.00	1.00
	195		1				2.00	.90

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

h. THE ORGANIC CHEMICAL INDUSTRY

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Nitrobenzene
 SIC 2861

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	109	2,850	1	109	2,850
Nonregulated	102	2,670	1	102	2,670
Total	-	-	2	210	6,500
Medium					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Small					
Regulated	23	602	1	23	602
Nonregulated	37	970	4	148	3,880
Total	-	-	5	170	4,500
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	7	380	10,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Benzylchloride
 SIC 2865

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	20	20	1	20	20
Nonregulated	20	20	1	20	20
Total	-	-	2	40	40
Medium					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Small					
Regulated	-	-	0	-	-
Nonregulated	2	2	2	4	4
Total	-	-	2	4	4
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	4	44	44

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Furfural
 SIC 2865

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	21	12,600	3	63	37,800
Nonregulated	18	10,800	2	36	21,600
Total	—	—	5	99	60,000
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	5	100	60,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Toluene Diisocyanate
 SIC 2865

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	41	860	1	41	860
Nonregulated	—	—	0	—	—
Total	—	—	1	41	860
Medium					
Regulated	32	670	3	96	2,010
Nonregulated	28	580	4	110	2,300
Total	—	—	7	210	4,300
Small					
Regulated	13	270	2	26	540
Nonregulated	—	—	0	—	—
Total	—	—	2	26	540
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	10	280	5,700

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
Industry Segment: Acrylonitrile
SIC 2859

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
A	145	900,000 ^c	2	0	0.88	290	1,900,000
B	88	260,000 ^d	0	1	1.09	96	280,000
Expected Case	150	890,000 ^c	3	0	0.833	420	2,500,000
Total	-	-	5	1	-	810	4,700,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

c. Includes 880,000 MT of deep well-injected waste.

d. Includes 200,000 MT of deep well-injected waste.

Sources: Pope-Reid Associates, Inc., and Temple, Barker & Sloane, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Chlorobenzene
 SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	0	—	—
Nonregulated	43	1,900	1	43	1,900
Total	—	—	1	43	1,900
Medium					
Regulated	30	1,300	1	30	1,300
Nonregulated	20	900	3	61	2,700
Total	—	—	4	91	4,000
Small					
Regulated	1	50	1	1	50
Nonregulated	—	—	0	—	—
Total	—	—	1	1	50
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	6	130	6,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Poppe-Heid Associates, Inc., and Temple, Barker & Sloane, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Chloromethanes/Perchloroethylene
 SIC 2869 (partial)

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Methyl Chloride	24	7,100	3	3	0.77	110	33,000
Perchloroethylene and Carbon Tetrachloride	120	9,300	2	0	1.01	240	19,000
Methanol	120	6,100	2	2	1.02	470	25,000
Perchloroethylene from EDC	49	46,000	4	0	0.86	190	180,000
Other Chloromethanes	54	3,400	1	4	1.05	280	18,000
Total			12	6		1,300	280,000

- a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.
 b. Application of the scaling factor yields production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Temple, Barker & Sloane, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
Industry Segment: Epichlorohydrin
SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	95	5,000	1	95	5,000
Nonregulated	—	—	0	—	—
Total	—	—	1	95	5,000
Medium					
Regulated	26	1,400	2	52	2,800
Nonregulated	—	—	0	—	—
Total	—	—	2	52	2,800
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG ^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	3	150	7,800

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
Industry Segment: Ethanolamines
SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large^a					
Regulated ^a	77	6,200	1	77	6,200
Nonregulated	—	—	0	—	—
Total	—	—	1	77	6,200
Medium					
Regulated	30	2,400	2	60	4,800
Nonregulated	—	—	0	—	—
Total	—	—	2	60	4,800
Small					
Regulated	14	1,100	2	28	2,200
Nonregulated	—	—	0	—	—
Total	—	—	2	28	2,200
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	5	165	13,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Ethylene Dichloride/Vinyl Chloride Monomer
 SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
A	360	540,000 ^c	7	2	0.75	2,400	3,600,000
B	96	144,000 ^d	6	0	1.22	700	1,000,000
C	82	73,000 ^e	5	0	1.07	430	390,000
Total	-	-	18	2	-	3,500	4,900,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

c. Includes 620,000 MT of deep well-injected waste.

d. Includes 139,000 MT of deep well-injected waste.

e. Includes 72,000 MT of deep well-injected waste.

Sources: Pope-Field Associates, Inc., and Temple, Barker & Sloane, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Fluoromethanes
 SIC 2889

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Small					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
SWG^b					
Regulated	36	7.6	5	180	38
Nonregulated	30	6.0	5	150	30
Total	—	—	10	—	—
Total	—	—	10	330	68

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Lead Alkyls
 SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	67	6,500	4	270	26,000
Nonregulated	74	8,000	1	74	8,000
Total	-	-	5	340	34,000
Medium					
Regulated	18	2,000	1	18	2,000
Nonregulated	-	-	0	-	-
Total	-	-	1	18	2,000
Small					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	6	360	36,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Maleic Anhydride
 SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large^a					
Regulated ^a	16	470	3	48	1,400
Nonregulated	19	550	6	93	2,800
Total	—	—	8	140	4,200
Medium					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Small					
Regulated	3	90	1	3	90
Nonregulated	7	210	1	7	210
Total	—	—	2	10	300
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	10	150	4,500

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Methyl Methacrylate
 SIC 2869

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants ^a Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated	220	19,000	1	220	19,000
Nonregulated	—	—	0	—	—
Total	—	—	1	220	19,000
Medium					
Regulated	—	—	0	—	—
Nonregulated	60	5,000	2	120	10,000
Total	—	—	2	120	10,000
Small					
Regulated	26	2,000	1	26	2,000
Nonregulated	—	—	0	—	—
Total	—	—	1	26	2,000
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	4	370	31,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ORGANIC CHEMICAL INDUSTRY

Industry Segment: Fluoromethanes
SIC 2869

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	2	6
Less than 1000 kg/month	10	68
Greater than 1000 kg/month	0	0
Total	10	68

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Nitrobenzene

SIC 2861

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large							
Regulated	1						
Non-Regulated	1						
Medium							
Regulated							
Non-Regulated							
Small							
Regulated	1						
Non-Regulated	4						
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Benzylchloride

SIC 2865

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1							
Non-Regulated	1							
Medium								
Regulated								
Non-Regulated								
Small								
Regulated								
Non-Regulated	2							
SUG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Furfural

SIC 2865

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With	
		Disposal	Treatment/ Storage	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant
			Both	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large					
Regulated					
Non-Regulated					
Medium					
Regulated	3				
Non-Regulated	2				
Small					
Regulated					
Non-Regulated					
SMG					
Regulated					
Non-Regulated					

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Toluene Dithiocyanate

SIC 2865

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large Regulated			1				9.00	20.00
Non-Regulated								
Medium Regulated			3				9.00	5.00
Non-Regulated			4				9.00	5.00
Small Regulated	1		1				9.00	5.00
Non-Regulated								
SWG Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Acrylonitrile

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
A)							
• Regulated ^a	0	0	2	0	0	2.6	2.3
• Non-Regulated ^a	0	0	0	0	0	0	0
B)							
• Regulated	0	0	0	0	0	0	0
• Non-Regulated	1	0	0	0	0	0	0
Expected Case							
• Regulated	0	0	3	0	0	2.6	2.3
• Non-Regulated	0	0	0	0	0	0	0
• Regulated							
• Non-Regulated							

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc., and Temple, Barker and Sloane, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Chlorobenzene
 SIC 2869

	Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With	
			Disposal	Treatment/ Storage	Disposal Impoundments	Treatment/Storage Impoundments
					No. per Plant	Surface Area/Plant (Acres)
Q-168	Large					
	Regulated					
	Non-Regulated	1				
	Medium					
	Regulated	1				
	Non-Regulated	3				
	Small					
	Regulated	1				
	Non-Regulated					
	SWG					
	Regulated					
	Non-Regulated					

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY
Industry Segment: Chloromethanes/Perchloroethylene
SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Methyl Chloride								
• Regulated ^a	0	0	3	0	0	0	3.1	7.4
• Non-Regulated ^a	0	0	3	0	0	0	3.1	7.4
Perchloroethylene and Carbon Tet.								
• Regulated	2	0	0	0	0	0	0	0
• Non-Regulated	0	0	0	0	0	0	0	0
Chloromethanes and Perchloroethylene								
• Regulated	0	0	2	0	0	0	3.1	7.4
• Non-Regulated	0	0	2	0	0	0	3.1	7.4
Perchloroethylene from EDC								
• Regulated	0	0	4	0	0	0	3.1	7.4
• Non-Regulated	0	0	0	0	0	0	0	0
Other Chloromethanes								
• Regulated	0	0	1	0	0	0	3.1	7.4
• Non-Regulated	0	0	4	0	0	0	3.1	7.4

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Ridil Associates, Inc., and Temple, Barker and Sloane, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Epichlorohydrin
 SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundment No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1							
Non-Regulated								
Medium								
Regulated	2							
Non-Regulated								
Small								
Regulated								
Non-Regulated								
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Ethanolamines

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large							
Regulated	1						
Non-Regulated							
Medium							
Regulated	2						
Non-Regulated							
Small							
Regulated	2						
Non-Regulated							
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY
 Industry Segment: Ethylene Dichloride/Vinyl Chloride Monomer
 SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal	Treatment/Storage	Surface Area/Plant (Acres)
A)	Regulated ^a	0	7	0	0	0	0
	Non-Regulated ^a	0	2	0	0	0	0
B)	Regulated	0	6	0	0	0	0
	Non-Regulated	0	0	0	0	0	0
C)	Regulated	0	5	0	0	0	0
	Non-Regulated	0	0	0	0	0	0

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc., and Temple, Barker and Sloane, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Fluoromethanes

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated								
Non-Regulated								
Medium Regulated								
Non-Regulated								
Small Regulated								
Non-Regulated								
SWG Regulated	1		4				1.00	.10
Non-Regulated	1		4				1.00	.10

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Lead Alkyls

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With	
		Disposal	Treatment/ Storage	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant
Large					
Regulated	2				
Non-Regulated	1		2		
Medium					
Regulated	1				
Non-Regulated					
Small					
Regulated					
Non-Regulated					
SVG					
Regulated					
Non-Regulated					
				6.00	17.60

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Maleic Anhydride

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
Large							
Regulated	3						
Non-Regulated	5						
Medium							
Regulated							
Non-Regulated							
Small							
Regulated	1						
Non-Regulated	1						
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

ORGANIC CHEMICAL INDUSTRY

Industry Segment: Methyl Methacrylate

SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated			1					
Non-Regulated							1.00	3.30
Medium Regulated								
Non-Regulated	2							
Small Regulated								
Non-Regulated	1							
SWG Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

i. THE PESTICIDE INDUSTRY

MODEL PLANT SPECIFICATIONS
PESTICIDE INDUSTRY
 Industry Segment: Active Ingredients
 SIC 2869

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
				R	NR			
Large	13,000	-	14,000	12	18	390,000	-	420,000
Medium	6,000	-	6,500	12	18	180,000	-	200,000
Small	1,400	-	1,500	22	32	75,000	-	80,000
SWG ^b	6	-	6	2	4	35	-	37
Total	-	-	-	48	72	645,000	-	700,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
PESTICIDE INDUSTRY
Industry Segment: Agricultural Chemicals, nec^c
SIC 2879

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	120	1,100	600	2	3	600	5,600	3,000
Medium	18	170	89	12	15	480	4,500	2,403
Small	4	34	18	45	52	360	3,300	1,746
SWG ^b	.6	6	3	129	152	170	1,600	843
Total	-	-	-	188	222	1,600	15,000	8,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

c. Not elsewhere classified.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PESTICIDE INDUSTRY

Industry Segment: Active Ingredients
SIC 2869

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	6	36
Less than 1000 kg/month	6	36
Greater than 1000 kg/month	114	700,000
Total	120	700,000

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PESTICIDE INDUSTRY

Industry Segment: Agricultural Chemicals, nec
SIC 2879

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants * In Waste Generation Category (Metric Tons)
Less than 100 kg/month	71	57
Less than 500 kg/month	217	420
Less than 1000 kg/month	281	800
Greater than 1000 kg/month	129	7,200
Total	410	8,000

Source: Arthur D. Little, Inc., estimates.

· SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

PESTICIDE INDUSTRY

Industry Segment: Active Ingredients
SIC 2869

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With	
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	
					No. per Plant	Surface Area/Plant (Acres)
Large	Regulated	3	9			
	Non-Regulated	5	13			
Medium	Regulated	2	10		5.00	25.10
	Non-Regulated	5	13		5.00	17.30
Small	Regulated	6	16		5.00	11.90
	Non-Regulated	9	23		5.00	8.30
SWG	Regulated	1	1		5.00	2.70
	Non-Regulated	1	3		5.00	1.90
					5.00	.20
					5.00	.20

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

PESTICIDE INDUSTRY

Industry Segment: Agricultural Chemicals N.E.C.

SIC 2879

Model	No. of Plants With No Impoundments	Plants With Impoundments		Disposal Impoundments		Plants With		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant
Large									
Regulated			1	1	2.00	2.60	2.00	2.60	2.00
Non-Regulated			1	2	2.00	2.00	2.00	2.00	2.00
Medium									
Regulated	4		2	6	2.00	.40	2.00	.40	2.00
Non-Regulated	7		2	6	2.00	.50	2.00	.50	2.00
Small									
Regulated	36		1	8	2.00	.20	2.00	.20	2.00
Non-Regulated	43		1	8	2.00	.30	2.00	.30	2.00
SWG									
Regulated	123			6	2.00	.10	2.00	.10	2.00
Non-Regulated	146			6	2.00	.20	2.00	.20	2.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

j. THE COMMERCIAL EXPLOSIVES INDUSTRY

MODEL PLANT SPECIFICATIONS
COMMERCIAL EXPLOSIVES INDUSTRY
 Industry Segment: Blasting Agents
 SIC 2892

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented R NR	Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
Large	—	—	—	0 0	—	—	—
Medium	65	450	213	9 11	1,300	9,000	4,300
Small	14	96	45	10 13	310	2,200	1,000
SWG ^b	2	14	7	16 21	80	500	300
Total	—	—	—	35 45	1,690	11,700	5,600

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
COMMERCIAL EXPLOSIVES INDUSTRY
Industry Segment: Fixed High Explosives
SIC 2892

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	—	—	—	0	0	—	—	—
Medium	18	144	180	2	3	90	720	900
Small	2	17	20	2	2	8	66	80
SWG ^b	.3	3	3	3	3	2	15	20
Total	—	—	—	7	8	100	800	1,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE COMMERCIAL EXPLOSIVES INDUSTRY

Industry Segment: **Blasting Agents**
SIC 2892

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	10	18
Less than 500 kg/month	30	110
Less than 1000 kg/month	37	300
Greater than 1000 kg/month	43	5,300
Total	80	5,600

Sources: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE COMMERCIAL EXPLOSIVES INDUSTRY

Industry Segment: Fixed High Explosives
SIC 2892

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	4	8
Less than 1000 kg/month	6	20
Greater than 1000 kg/month	9	980
Total	15	1,000

Sources: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
COMMERCIAL EXPLOSIVES INDUSTRY
 Industry Segment: Blasting Agents
 SIC 2892

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large Regulated							
Non-Regulated			9			14.30	
Medium Regulated			11			17.50	
Non-Regulated			10				4.00
Small Regulated			13				1.00
Non-Regulated						13.40	
SWG						12.00	
Regulated			16				1.00
Non-Regulated			21			4.00	1.00

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Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
COMMERCIAL EXPLOSIVES INDUSTRY
 Industry Segment: Fixed High Explosives
 SIC 2892

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundment	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large Regulated							
Non-Regulated							
Medium Regulated				2			4.00
Non-Regulated				3			4.00
Small Regulated				2			4.00
Non-Regulated				2			4.00
SWG Regulated				3			1.00
Non-Regulated				3			1.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

k. THE PETROLEUM REFINING INDUSTRY

**MODEL PLANT SPECIFICATIONS
PETROLEUM REFINING INDUSTRY
SIC 2911**

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	10,000	26,000	40	402,000	1,000,000
Nonregulated	7,000	18,000	12	84,000	200,000
Total	—	—	52	486,000	1,200,000
Medium					
Regulated	2,600	6,700	33	86,000	220,000
Nonregulated	2,700	6,800	37	99,000	250,000
Total	—	—	70	185,000	470,000
Small					
Regulated	660	1,300	73	48,000	95,000
Nonregulated	680	1,300	90	61,000	120,000
Total	—	—	163	109,000	220,000
SWG^b					
Regulated	—	—	0	—	—
Nonregulated	3.7	7.3	3	11	22
Total	—	—	3	11	22
Total	—	—	285	780,000	1,900,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE PETROLEUM REFINING INDUSTRY

SIC 2911

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	0
Less than 500 kg/month	1	4.3
Less than 1000 kg/month	3	2.2
Greater than 1000 kg/month	282	1,900,000
Total	286	1,900,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PETROLEUM REFINING INDUSTRY
SIC 2911

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With	
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments
					No. per Plant	Surface Area/Plant (Acres)
Large	Regulated		27		9.00	86.00
	Non-Regulated		8		7.00	50.00
Medium	Regulated		22		4.00	8.00
	Non-Regulated		23		4.00	9.00
Small	Regulated		49		4.00	8.00
	Non-Regulated		59		4.00	4.00
SWG						
Regulated						
Non-Regulated						

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

I. THE PETROLEUM REREFINING INDUSTRY

**MODEL PLANT SPECIFICATIONS
PETROLEUM REREFINING INDUSTRY
SIC 2892**

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	41	13,000	1	0	41	13,000
Medium	25	8,000	1	3	99	31,000
Small	6	2,000	11	7	115	37,000
SWG ^b	—	—	0	0	—	—
Total	—	—	13	10	255	81,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
PETROLEUM REFINING INDUSTRY
SIC 2992

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Plants With		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated Non-Regulated				1	2.00	7.80	2.00	17.80		
Medium Regulated Non-Regulated			1	1	2.00	4.60	2.00	10.80		
Small Regulated Non-Regulated			2	2	2.00	7.00	2.00	10.80		
SVG Regulated Non-Regulated			4	7	2.00	1.80	2.00	2.80		
			2	5	2.00	1.60	2.00	2.80		

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

m. THE RUBBER PRODUCTS INDUSTRY

**MODEL PLANT SPECIFICATIONS
RUBBER PRODUCTS INDUSTRY**
Industry Segment: Tires and Inner Tubes
SIC 3011

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
				R	NR			
Large	61	2,060	585	18	28	2,820	93,800	27,000
Medium	9	358	100	19	29	427	17,200	4,800
Small	3	55	19	10	16	70	1,400	500
SWG ^b	.03	12	3	35	55	3	1,100	300
Total	-	-	-	82	128	3,320	114,500	32,600

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
RUBBER PRODUCTS INDUSTRY
 Industry Segment: Other Rubber Products
 SIC 3021, 3031, 3041, 3069

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
				R	NR			
Large	31	2,600	350	6	9	470	39,000	5,200
Medium	5.4	440	60	48	73	650	53,000	7,100
Small	1.3	110	15	126	183	420	35,000	4,600
SWG ^b	0.3	22	3	431	619	280	23,000	3,100
Total	-	-	-	611	889	1,800	150,000	20,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE RUBBER PRODUCTS INDUSTRY

Industry Segment: Tires and Inner Tubes
SIC 3011

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	30	22
Less than 500 kg/month	70	140
Less than 1000 kg/month	80	300
Greater than 1000 kg/month	120	33,000
Total	210	33,000

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE RUBBER PRODUCTS INDUSTRY

Industry Segment: Other Rubber and Plastic Products
SIC 3021, 3031, 3041, 3069

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	460	210
Less than 500 kg/month	890	1,600
Less than 1000 kg/month	1,050	3,100
Greater than 1000 kg/month	450	16,900
Total	1,500	20,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

RUBBER PRODUCTS INDUSTRY

Industry Segment: Tires and Inner Tubes

SIC 3011

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
Large	Regulated		4	1	3.00	3.00	2.10
	Non-Regulated		5	1	3.00	3.00	2.60
Medium	Regulated		4	1	3.00	3.00	.30
	Non-Regulated		5	1	3.00	3.00	.50
Small	Regulated		2			3.00	.10
	Non-Regulated		2	1	3.00	3.00	.10
SVG	Regulated		1			3.00	.10
	Non-Regulated		1			3.00	.10

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

RUBBER PRODUCTS INDUSTRY

Industry Segment: Other Rubber and Plastic Products

SIC 3021, 3031, 3041, 3069

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundme	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large	Regulated		2	4			2.00	1.20
	Non-Regulated		4	5			2.00	1.20
Medium	Regulated		40	8			2.00	1.00
	Non-Regulated		65	8			2.00	1.00
Small	Regulated		125	1			2.00	.80
	Non-Regulated		188					.80
SWG	Regulated		431					
	Non-Regulated		616	1			2.00	.50

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

n. THE LEATHER TANNING AND
FINISHING INDUSTRY

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Chrome Tan — Pulp Hair
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large	16	18,000	4	8	0.86	160	190,000
Large	7.9	8,300	5	11	0.86	110	110,000
Medium	4.8	4,600	10	10	0.86	83	80,000
Small	2.1	2,100	12	6	0.86	33	33,000
Extra-Small	0.5	380	2	6	0.86	3.7	2,600
Total	—	—	33	41	—	380	415,600

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
Industry Segment: Chrome Tan - Save Hair
SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large	16	12,000	2	0	0.86	31	21,000
Large	7.9	5,800	3	0	0.86	20	15,000
Medium	4.8	3,500	2	0	0.86	8	5,900
Extra-Small	0.5	390	1	1	0.86	0.86	650
Total	-	-	8	1	-	60	43,000

G-207

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Nonchrome Tan
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	7.9	3,300	0 3	1.14	2.4	15,000
Medium	3.3	1,300	0 4	1.14	15	5,800
Small	0.5	440	1 4	1.14	3.4	2,000
Total	-	-	1 11	-	53	23,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates. *

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Retan - Wet Finish
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Splits	4.1	1,200	5	13	1.11	82	22,000
Sides	5.4	1,500	12	7	1.00	100	29,000
Total	-	-	17	20	-	180	51,000

2. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: No Beamhouse
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	4.3	2,000	5	4	0.95	37	17,000
Medium	1.8	840	4	2	0.95	10	4,800
Small	0.9	420	4	10	0.95	12	5,600
Total	-	-	13	16	0.95	59	27,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Through-the-Blue
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	22	10,000	4	2	0.65	87	17,000
Small	9.5	4,500	0	6	0.65	37	41,000
Total	-	-	4	8	-	120	58,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Shearlings
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	2.7	700	3	1	1.07	12	2,900
Small	0.8	210	3	2	1.07	4	1,100
Total	-	-	6	3	-	16	4,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Finishers
 SIC 3111

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Scaling Factor ^b	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR			
Large	3.4	10	9	26	0.51	67	180
Small	1.2	4	13	37	0.51	31	100
Total			22	63	-	98	280

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Application of the scaling factor yields total production and waste of the industry segment.

Sources: Pope-Reid Associates, Inc., and Development Planning & Research Associates, Inc., estimates.

**SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
LEATHER TANNING AND FINISHING INDUSTRY**

Industry Segment: Finishers
SIC 3111

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	45	10
Less than 500 kg/month	65	70
Less than 1000 kg/month	75	140
Greater than 1000 kg/month	10	140
Total	85	280

Note: Numbers may not sum correctly due to independent rounding.

Sources: Development Planning & Research Associates, Inc., and Pope-Reid Associates, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Chrome Tan-Pulp Hair
 SIC 3111 (Part)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Extra Large							
• Regulated ^a	4	0	0	0	0	0	0
• Non-Regulated ^a	8	0	0	0	0	0	0
Large							
• Regulated	5	0	0	0	0	0	0
• Non-Regulated	10	0	1	0	0	6	2.1
Medium							
• Regulated	9	0	1	0	0	2	4.4
• Non-Regulated	10	0	0	0	0	0	0
Small							
• Regulated	11	0	1	0	0	6	12.4
• Non-Regulated	6	0	0	0	0	0	0
Extra Small							
• Regulated	2	0	0	0	0	0	0
• Non-Regulated	6	0	0	0	0	0	0

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope Reirt Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

LEATHER TANNING AND FINISHING INDUSTRY

Industry Segment: Chrome Tan-Save Hair

SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Plants With Treatment/Storage Impoundments		
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Extra Large									
• Regulated ^a	1	0	1	0	0	0	3	8.8	
• Non-Regulated ^a	0	0	0	0	0	0	0	0	
Large									
• Regulated	2	0	1	0	0	0	2	0.7	
• Non-Regulated	0	0	0	0	0	0	0	0	
Medium									
• Regulated	1	0	1	0	0	0	4	2.5	
• Non-Regulated	0	0	0	0	0	0	0	0	
Extra Small									
• Regulated	1	0	0	0	0	0	0	0	
• Non-Regulated	1	0	0	0	0	0	0	0	

a. Plants located in states with or without regulations similar to RCRA.

Source: Pope-Reld Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Nonchrome Tan
 SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With				
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments		
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Large									
● Regulated ^a	0	0	0	0	0	0	0	0	
● Non-Regulated ^a	1	0	2	1	1	0.8	3	6.0	
Medium									
● Regulated	0	0	0	0	0	0	0	0	
● Non-Regulated	2	1	0	1	1	0.5	2	21.0	
Small									
● Regulated	1	0	0	0	0	0	0	0	
● Non-Regulated	1	1	0	1	1	0.33	2	1.0	
SWG ^b									
● Regulated	-	-	-	-	-	-	-	-	
● Non-Regulated	-	-	-	-	-	-	-	-	

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reit Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Retan -- Wet Finish
 SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Splits								
● Regulated ^a	5	—	—	—	—	—	—	—
● Non-Regulated ^a	13	—	—	—	—	—	—	—
Sides								
● Regulated	12	—	—	—	—	—	—	—
● Non-Regulated	7	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

LEATHER TANNING AND FINISHING INDUSTRY

Industry Segment: No Beamhouse

SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
• Regulated ^a	3	0	1	1	1	0.25	3
• Non-Regulated ^a	3	0	1	0	0	0	2
Medium							
• Regulated	3	1	0	0	1	0.25	0
• Non-Regulated	2	0	0	0	0	0	0
Small							
• Regulated	3	1	0	0	1	0.25	0
• Non-Regulated	10	0	0	0	0	0	0
SWG ^b							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12MT of hazardous waste per year.

Sources: Pope Reid Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
LEATHER TANNING AND FINISHING INDUSTRY
 Industry Segment: Through-The-Blue
 SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundment No. per Plant	Surface Area/Plant (Acres)
					No. per Plant	Surface Area/Plant (Acres)		
Large								
● Regulated ^a	2	-	2	-	-	-	2	4.0
● Non-Regulated ^a	2	-	0	-	-	-	0	0
Medium								
● Regulated	0	-	0	-	-	-	0	0
● Non-Regulated	5	-	1	-	-	-	2	4.0
Small								
● Regulated	-	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-	-
SWG ^b								
● Regulated	-	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

LEATHER TANNING AND FINISHING INDUSTRY

Industry Segment: Shearlings

SIC 3111

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
● Regulated ^a	3	-	-	-	-	-	-	
● Non-Regulated ^a	1	-	-	-	-	-	-	
Medium								
● Regulated	-	-	-	-	-	-	-	
● Non-Regulated	-	-	-	-	-	-	-	
Small								
● Regulated	3	-	-	-	-	-	-	
● Non-Regulated	2	-	-	-	-	-	-	
SWG ^b								
● Regulated	-	-	-	-	-	-	-	
● Non-Regulated	-	-	-	-	-	-	-	

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc., and Development Planning and Research Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

LEATHER TANNING AND FINISHING INDUSTRY

Industry Segment: Finishers

SIC 3111

Model	No. of Plants With No Impoundments	Plants with Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundme No. per Plant	Surface Area/Plant (Acres)
					No. per Plant	Surface Area/Plant (Acres)		
Large								
● Regulated ^a	9	-	-	-	-	-	-	-
● Non-Regulated ^a	26	-	-	-	-	-	-	-
Medium								
● Regulated	-	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-	-
Small								
● Regulated	13	-	-	-	-	-	-	-
● Non-Regulated	37	-	-	-	-	-	-	-
SWG ^b								
● Regulated	-	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Pope-Reid Associates, Inc., and Development Planning and Research Associates, Inc.

o. THE FERROUS METAL SMELTING AND
REFINING INDUSTRY

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron and Steel — Alloy and Specialty Steel
 SIC 3312

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	850	17,790	3	2,540	53,360
Nonregulated	550	11,500	8	4,390	92,040
Total			11	6,930	145,400
Medium					
Regulated	108	2,255	2	215	4,510
Nonregulated	196	650	7	1,370	4,510
Total			9	1,585	9,020
Small					
Regulated	53	1,100	11	580	12,140
Nonregulated	69	1,440	13	890	18,670
Total			24	1,470	30,810
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total			44	9,985	185,230

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron and Steel — Coke/Iron
 SIC 3312

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	6,900	10,600	1	6,900	10,600
Nonregulated	774	1,190	1	774	1,190
Total			2	7,674	11,790
Medium					
Regulated	540	830	1	540	830
Nonregulated	530	820	3	1,600	2,450
Total			4	2,140	3,280
Small					
Regulated	260	400	1	260	400
Nonregulated	215	330	1	215	330
Total			2	475	730
SWG^b					
Regulated					
Nonregulated					
Total					
Total			8	10,289	15,800

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron and Steel-Integrated Plants
 SIC 3312

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	6,360	24,780	6	38,150	148,640
Nonregulated	4,300	16,750	6	25,800	100,520
Total			12	63,950	249,160
Medium					
Regulated	3,230	11,520	11	32,520	126,710
Nonregulated	3,060	17,980	9	27,540	107,300
Total			20	60,061	234,010
Small					
Regulated	1,150	4,480	7	8,075	31,460
Nonregulated	1,650	6,490	4	6,600	25,950
Total			11	14,675	57,410
SWG^b					
Regulated			---	---	---
Nonregulated			---	---	---
Total					

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron and Steel — Nonintegrated Plants and Minimills
 SIC 3312

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	660	6,050	15	9,860	90,720
Nonregulated	520	4,770	9	4,670	42,960
Total			24	14,530	133,680
Medium					
Regulated	170	1,550	6	1,010	9,275
Nonregulated	160	1,440	10	1,565	14,400
Total			16	2,575	23,675
Small					
Regulated	58	54	10	580	5,335
Nonregulated	64	59	10	640	5,850
Total			20	1,220	11,185
SWG^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	60	18,325	168,540

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron and Steel-Rollers
 SIC 3312

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	3,050	1,735	3	9,160	5,200
Nonregulated	3,430	1,950	4	13,700	7,800
Total			7	22,860	13,005
Medium					
Regulated	640	360	3	2,560	1,450
Nonregulated	--	--	0	--	--
Total			3	2,560	1,450
Small					
Regulated	102	58	11	1,120	630
Nonregulated	105	59	12	1,260	710
Total			23	2,380	1,340
SWG^b					
Regulated			--	--	--
Nonregulated			--	--	--
Total			33		16,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferroalloys
 SIC 3313

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	67,000	18,000	3	201,000	48,000
Nonregulated	108,000	11,000	3	324,000	34,000
Total	--	--	6	525,000	83,000
Medium					
Regulated	18,000	5,000	2	36,000	10,000
Nonregulated	19,000	6,000	2	38,000	12,000
Total	--	--	4	74,000	22,000
Small					
Regulated	9,000	4,000	1	9,000	4,000
Nonregulated	9,000	1,000	1	9,000	1,000
Total	--	--	2	18,000	5,000
SWG^b					
Regulated	N.A.	N.A.	0	N.A.	N.A.
Nonregulated	N.A.	N.A.	0	N.A.	N.A.
Total	--	--	0	N.A.	N.A.
Total	--	--	12	617,000	110,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
Industry Segment: Ferrous Foundries - Ductile Iron - Captive
SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	-	-	1	-	-
Nonregulated	140	1,200	1	430	3,500
Total	-	-	2	430	3,500
Medium					
Regulated	100	870	0	310	2,600
Nonregulated	-	-	2	-	-
Total	-	-	2	310	2,600
Small					
Regulated	-	-	2	-	-
Nonregulated	-	-	0	-	-
Total	-	-	2	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	6	740	6,100

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries - Ductile Iron - Noncaptive
 SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	93	770	1	650	5,400
Nonregulated	160	1,300	3	1,100	8,800
Total	-	-	4	1,800	14,000
Medium					
Regulated	14	110	6	41	330
Nonregulated	15	120	4	120	990
Total	-	-	10	160	1,300
Small					
Regulated	-	-	3	-	-
Nonregulated	-	-	8	-	-
Total	-	-	11	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	25	1,900	16,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
Industry Segment: Ferrous Foundries - Gray Iron - Captive
SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large					
Regulated	160	1,200	20	1,700	13,000
Nonregulated	89	710	9	800	6,400
Total	-	-	29	2,500	19,000
Large					
Regulated	27	220	10	280	2,200
Nonregulated	24	190	3	71	590
Total	-	-	13	350	2,800
Medium					
Regulated	6.5	55	33	220	1,800
Nonregulated	5.7	47	50	280	2,400
Total	-	-	83	500	4,200
Small					
Regulated	1.8	15	6	11	89
Nonregulated	1.8	15	15	28	230
Total	-	-	21	38	320
SWGB					
Regulated	1.0	8.3	6	6	50
Nonregulated	1.0	8.7	11	12	96
Total	-	-	17	18	150
Total	-	-	163	3,400	27,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries — Gray Iron — Noncaptive
 SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large					
Regulated	85	750	13	1,100	9,800
Nonregulated	125	1,000	24	3,000	26,000
Total	—	—	37	4,100	35,000
Large					
Regulated	26	210	15	380	3,100
Nonregulated	22	18	10	220	1,800
Total	—	—	25	600	4,900
Medium					
Regulated	5.8	48	174	1,000	8,400
Nonregulated	5.4	45	213	1,200	9,600
Total	—	—	387	2,200	18,000
Small					
Regulated	1.8	16	56	100	890
Nonregulated	1.9	16	68	130	1,100
Total	—	—	124	230	2,000
SWG^b					
Regulated	1.1	8.6	50	53	430
Nonregulated	1.0	8.2	91	91	750
Total	—	—	141	140	1,200
Total	—	—	714	7,300	61,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries - Malleable Iron - Captive
 SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large					
Regulated ^a	-	-	0	-	-
Nonregulated	110	830	3	320	2,500
Total	-	-	3	320	2,500
Medium					
Regulated	20	140	3	60	420
Nonregulated	12	80	2	24	160
Total	-	-	5	84	580
Small					
Regulated	3.6	26	2	7.2	50
Nonregulated	-	-	0	-	-
Total	-	-	2	7.2	50
SWG ^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	10	410	3,100

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates.

MODEL PLANT SPECIFICATIONS
FERROUS METAL SMELTING AND REFINING INDUSTRY
Industry Segment: Ferrous Foundries — Malleable Iron — Noncaptive
SIC 332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large					
Regulated ^a	—	—	0	—	—
Nonregulated	312.9	2,660	0	312.9	2,660
Total			0	312.9	2,660
Large					
Regulated	40.7	330	1	40.7	330
Nonregulated	40.1	320	3	80.2	660
Total			4	120.9	990
Medium					
Regulated	15.6	90	3	46.9	280
Nonregulated	12.6	70	3	37.7	210
Total			6	84.6	490
Small					
Regulated	2.5	20	3	7.4	60
Nonregulated	3.1	30	1	3.1	30
Total			4	10.5	90
SWG ^b					
Regulated	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Total	—	—	14	529	4,220

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates.

**SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
FERROUS METAL SMELTING AND REFINING INDUSTRY
Industry Segment: Ferrous Foundries Gray Iron - Captive
SIC 332**

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	2	7.1
Less than 1000 kg/month	17	150
Greater than 1000 kg/month	137	27,000
Total	154	27,000

Source: Arthur D. Little, Inc., estimates.

**SMALL WASTE GENERATOR SUBCATEGORIES FOR THE
FERROUS METAL SMELTING AND REFINING INDUSTRY**
Industry Segment: Ferrous Foundries Gray Iron - Noncaptive
SIC 332

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	0	-
Less than 500 kg/month	17	60
Less than 1000 kg/month	141	1,200
Greater than 1000 kg/month	573	60,000
Total	714	61,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron & Steel — Alloy and Specialty Steel
 SIC 3312

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
Regulated	3						
Non-Regulated	1	2	5		1.00	4.03	2.00
Medium							
Regulated	2						
Non-Regulated	1	1	5		4.00	12.00	4.00
Small							
Regulated	11						
Non-Regulated	13						
SWG							
Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

**SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY**

Industry Segment: Iron & Steel - Coke/Iron
SIC 3312

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1							
Non-Regulated	1							
Medium								
Regulated	1							
Non-Regulated	1				2		2.00	5.70
Small								
Regulated	1							
Non-Regulated	1							
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron & Steel — Integrated Plants
 SIC 3312

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundment	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated	2		3	1	3.00	19.70	3.00	13.50
	2		4				3.00	9.70
Medium Regulated	3		7	1	3.00	6.50	3.00	6.80
	3		6				3.00	6.40
Small Regulated	2		4	1	3.00*	3.20	3.00	4.60
	2		2				3.00	11.60
SWG								
Regulated								
Non-Regulated								

G-240

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron & Steel — Nonintegrated Plants and Minimills
 SIC 3312

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1		4	5	2.00	7.70	5.00	10.80
Non-Regulated	4		7				3.00	3.00
Medium								
Regulated	1		4	1	2.00	5.00	4.00	6.00
Non-Regulated	4		6				1.00	.90
Small								
Regulated	10							
Non-Regulated	10							
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Iron & Steel - Rerollers
 SIC 3312

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Plants With		Treatment/Storage Impoundment	
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large										
Regulated	2			1					2.00	3.00
Non-Regulated	1			3					1.00	2.00
Medium										
Regulated	3									
Non-Regulated										
Small										
Regulated	5			6					4.00	2.30
Non-Regulated	4			8					2.00	7.30
SWG										
Regulated										
Non-Regulated										

G-242

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrosilloys
 SIC 3313

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large Regulated Non-Regulated	1		3				4.00	5.00
Medium Regulated Non-Regulated	1		2				4.00	5.00
Small Regulated Non-Regulated			1				3.00	2.00
SWG Regulated Non-Regulated			2				3.00	2.00
				1	2.00	1.80	1.00	.40

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

FERROUS METAL SMELTING AND REFINING INDUSTRY

Industry Segment: Ferrous Foundries - Ductile Iron - Captive

SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With		Treatment/Storage Impoundment	
		Disposal	Treatment/ Storage	Both	Disposal No. per Plant	Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large Regulated	1						
Non-Regulated	1						
Medium Regulated	2						
Non-Regulated	2						
Small Regulated							
Non-Regulated							
SWG Regulated							
Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

Large
Regulated
Non-Regulated
Medium
Regulated
Non-Regulated
Small
Regulated
Non-Regulated
SWG
Regulated
Non-Regulated

Regulated plants are located in states with requirements similar to RCRA. Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries -- Gray Iron -- Captive
 SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundment No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated								
Non-Regulated								
Medium								
Regulated	32		1				2.00	.50
Non-Regulated	49			1	2.00	1.30	2.00	.60
Small								
Regulated	6							
Non-Regulated	15							
SWG								
Regulated	6							
Non-Regulated	11							

G-246

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries — Gray Iron — Captive — Large
 SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large				1			
Regulated							
Non-Regulated							
Medium							
Regulated	19						
Non-Regulated	9						
Small							
Regulated	10						
Non-Regulated	3						
SWG							
Regulated							
Non-Regulated							
					2.00	1.20	

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries - Gray Iron - Noncaptive
 SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area (Acres)
					No. per Plant	No. per Plant	Surface Area (Acres)
XX-Large							
• Regulated ^a	0	0	0	1	2	2	0.9
• Non-Regulated ^a	0	0	0	1	2	2	1.9
X-Large							
• Regulated	12	0	0	0	—	—	—
• Non-Regulated	22	0	1	0	—	2	4.9
Large							
• Regulated	15	0	0	0	—	—	—
• Non-Regulated	10	0	0	0	—	—	—
Medium							
• Regulated	170	0	3	1	2	2	0.6
• Non-Regulated	208	0	3	2	2	2	0.5
Small							
• Regulated	56	0	0	0	—	—	—
• Non-Regulated	68	0	0	0	—	—	—
SWG							
• Regulated	50	0	0	0	—	—	—
• Non-Regulated	91	0	0	0	—	—	—

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries - Malleable Iron - Captive
 SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated								
Non-Regulated		3			2.00	20.00		
Medium								
Regulated	2	1			2.00	5.00		
Non-Regulated	1	1			2.00	5.00		
Small								
Regulated	2							
Non-Regulated								
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
FERROUS METAL SMELTING AND REFINING INDUSTRY
 Industry Segment: Ferrous Foundries - Malleable Iron - Noncaptive
 SIC 332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	1							
Non-Regulated	1		2				2.00	.30
Medium								
Regulated	2		1				2.00	.10
Non-Regulated	2		1				2.00	.10
Small								
Regulated	2		1				2.00	.10
Non-Regulated	1							
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

p. THE NONFERROUS METAL SMELTING AND
REFINING INDUSTRY

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Aluminum
 SIC 3334

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
With Cryolite Recovery	160	19,000	1	4	810	93,000
Cathode Shippers	150	7,000	2	6	1,200	56,000
Dry APC	130	8,100	4	5	1,200	73,000
Wet APC	130	29,000	1	7	1,100	230,000
Total			8	22	4,300	460,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Lead
 SIC 3332

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented R NR	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Missouri Ores	130	8,300	0 3	380	25,000
Non-Missouri Ores	65	4,300	2 1	190	13,000
Total			2 4	570	38,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.
 Sources: Pope-Reid Associates, Inc., Arthur D. Little, Inc., and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Copper
 SIC 3331

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Smelters & Smelter/Refiners	84	180	1	12	1,100	2,300
Electric Furnace-Large	130	11	0	2	250	22
Electric Furnace-Small	12	1	0	1	12	1
Refiners	210	420	3	2	1,000	2,100
Total			4	17	2,300	4,400

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc., Arthur D. Little, Inc., and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Zinc
 SIC 3333

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Electrolytic	60	33,000	2	2	240	130,000
Pyrolytic	84	6,400	0	2	170	13,000
Total			2	4	410	143,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Aluminum - Dross Processing
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	24	0	3	5	190	0
Small	4.4	0	2	1	13	0
Total	-	-	5	6	200	0

^aR plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Aluminum - Non-Dross Processing
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Extra Large	37	0	9	11	740	0
Large	16	0	14	5	290	0
Medium	8.8	0	9	8	150	0
Small	4.2	0	10	12	92	0
Total	-	-	42	36	1,300	0

^aR plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Field Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Lead — Battery Cracking
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Extra-Large	43	7,700	3	1	170	31,000
Large	22	3,900	4	7	240	43,000
Medium	9	1,700	6	7	120	22,000
Small	5	840	0	2	94	1,700
Total			13	17	540	98,000

^a R plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Lead -- No Battery Cracking
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented R NR	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Extra-Large	40	13,000	0 1	40	13,000
Large			3 3		
Medium			5 4		
Small			<u>9</u> <u>9</u>	—	—
Total			17 17	40	13,000

^a R Plants are located in states with requirements similar to RCRA.
 NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Copper - Blast Furnace
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	59	160	2	2	230	590
Small	8.5	21	2	0	17	42
Total	-	-	4	2	250	630

^aR plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope Field Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Copper - Brass & Bronze Ingot
 SIC 3341

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Large	0	750	0	1	48	0
Medium	0	83	1	4	27	0
Small	0	17	3	2	<u>5.5</u>	<u>0</u>
Total	-	-	4	7	80	0

^a R plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Secondary Copper - Other

Model	Production Per Plant (000 MT)	Hazardous Waste Per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Extra Large	30	17	3	2	150	87
Large	9.4	6	1	2	28	17
Medium	5.7	3	1	1	11	6.8
Small	0.68	0.4	2	2	3	1.6
Total	-	-	7	7	190	110

^aR plants are located in states with requirements similar to RCRA.

NR plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

MODEL PLANT SPECIFICATIONS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Tungsten (Apt)
 SIC 3339

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	Number of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
			R	NR		
Primary Tungsten	1,800	0	3	4	7.2	0
Total			3	4	7.2	0

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Sources: Pope-Reid Associates, Inc., Arthur D. Little, Inc., and Sverdrup & Parcel and Associates, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE NONFERROUS METAL INDUSTRY

Industry Segment: Primary Copper
SIC 3331

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	1	1.0
Less than 500 kg/month	1	1.0
Less than 1000 kg/month	3	23.0
Greater than 1000 kg/month	18	4,400
Total	21	4,400

Note: Numbers may not sum correctly due to independent rounding.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Aluminum
 SIC 3334

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments
					No. per Plant	Surface Area/Plant (Acres)	
With Cryolite Recovery							
● Regulated ^a	1	—	0	—	—	0	0
● Non-Regulated ^a	0	—	4	—	—	3	29.2
Cathode Shippers							
● Regulated	0	—	2	—	—	2	19.5
● Non-Regulated	1	—	6	—	—	2	19.5
Dry APC							
● Regulated	0	—	4	—	—	3	29.2
● Non-Regulated	1	—	4	—	—	3	29.2
Wet APC							
● Regulated	0	—	1	—	—	2	19.5
● Non-Regulated	4	—	3	—	—	2	19.5

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Roelt Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Lead
 SIC 3332

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Plants With Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Missouri Ores								
● Regulated ^a	0	—	0	—	—	—	0	0
● Non-Regulated ^a	0	—	3	—	—	—	2	6.5
Non-Missouri Ores								
● Regulated	0	—	2	—	—	—	2	6.5
● Non-Regulated	0	—	1	—	—	—	2	6.5
● Regulated	—	—	—	—	—	—	—	—
● Non-Regulated	—	—	—	—	—	—	—	—
● Regulated	—	—	—	—	—	—	—	—
● Non-Regulated	—	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Copper
 SIC 3331

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
Smelters and S/Refiners							
• Regulated ^a	0	-	1	-	-	1	8.2
• Non-Regulated ^a	3	-	9	-	-	1	8.2
Electric Furnace-L							
• Regulated	0	-	0	-	-	0	0
• Non-Regulated	2	-	0	-	-	0	0
Electric Furnace-S							
• Regulated	0	-	0	-	-	0	0
• Non-Regulated	1	-	0	-	-	0	0
Refiners							
• Regulated	2	-	1	-	-	1	8.2
• Non-Regulated	2	-	0	-	-	0	-

^a Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Zinc
 SIC 3333

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With Treatment/Storage Impoundments		
		Disposal	Treatment/Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments
					No. per Plant	Surface Area/Plant (Acres)	
Electrolytic							
● Regulated ^a	0	-	2	-	-	-	1
● Non-Regulated ^a	2	-	0	-	-	-	0
Pyrolytic							
● Regulated	0	-	0	-	-	-	0
● Non-Regulated	0	-	2	-	-	-	1
● Regulated	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-
● Regulated	-	-	-	-	-	-	-
● Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
 Industry Segment: Secondary Aluminum — Dress Processing
 SIC 3341 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large							
• Regulated ^a	3	—	—	—	—	—	—
• Non-Regulated ^a	5	—	—	—	—	—	—
Medium							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—
Small							
• Regulated	2	—	—	—	—	—	—
• Non-Regulated	1	—	—	—	—	—	—
SWG							
• Regulated	—	—	—	—	—	—	—
• Non-Regulated	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Rold Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
 Industry Segment: Secondary Aluminum — Non-Dross Processing
 SIC 33-1 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With Treatment/Storage Impoundments			Plants With Disposal/Storage Impoundments		
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
X-Large										
• Regulated ^a	9	—	—	—	—	—	—	—	—	—
• Non-Regulated ^a	11	—	—	—	—	—	—	—	—	—
Large										
• Regulated	14	—	—	—	—	—	—	—	—	—
• Non-Regulated	5	—	—	—	—	—	—	—	—	—
Medium										
• Regulated	9	—	—	—	—	—	—	—	—	—
• Non-Regulated	8	—	—	—	—	—	—	—	—	—
Small										
• Regulated	10	—	—	—	—	—	—	—	—	—
• Non-Regulated	12	—	—	—	—	—	—	—	—	—

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
Industry Segment: Secondary Lead — Battery Cracking
SIC 33413 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface Area/Plant (Acres)
					No. per Plant	No. per Plant	
X-Large							
• Regulated ^a	1	—	2	—	—	1	0.16
• Non-Regulated ^a	1	—	0	—	—	1	0.16
Large							
• Regulated	2	—	2	—	—	1	0.16
• Non-Regulated	5	—	2	—	—	1	0.16
Medium							
• Regulated	3	—	3	—	—	1	0.16
• Non-Regulated	5	—	2	—	—	1	0.16
Small							
• Regulated	0	—	0	—	—	0	0
• Non-Regulated	1	—	1	—	—	1	0.18

^a Plant located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
Industry Segment: Secondary Lead -- No Battery Cracking
SIC 3341 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Plants With Treatment/Storage Impoundment	
		Disposal	Treatment/Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
X-Large								
• Regulated ^a	0	-	-	-	-	-	-	-
• Non-Regulated ^a	1	-	-	-	-	-	-	-
Large								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-
Medium								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-
Small								
• Regulated	-	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

**SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS METAL SMELTING AND REFINING INDUSTRY**
Industry Segment: Secondary Copper - Blast Furnace
SIC 3341

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant Surface Area/Plant (Acres)
Large	2	-	-	-	-	-	-
	2	-	-	-	-	-	-
• Regulated ^a							
• Non-Regulated ^a							
Medium	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
• Regulated							
• Non-Regulated							
Small	1	-	1	-	-	-	0.2
	0	-	0	-	-	-	0
• Regulated							
• Non-Regulated							
SWG	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
• Regulated							
• Non-Regulated							

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Field Associates, Inc.; Arthur D. Little, Inc.; Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
Industry Segment: Secondary Copper - Brass & Bronze Ingot
SIC 3341 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal No. per Plant	Impoundments Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant Surface Area/Plant (Acres)
Large							
• Regulated ^a	0	-	-	-	-	-	-
• Non-Regulated ^a	1	-	-	-	-	-	-
Medium							
• Regulated	1	-	-	-	-	-	-
• Non-Regulated	4	-	-	-	-	-	-
Small							
• Regulated	3	-	-	-	-	-	-
• Non-Regulated	2	-	-	-	-	-	-
SWG							
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	1	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Field Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING & REFINING INDUSTRY
 Industry Segment: Secondary Copper - Other
 SIC 3341 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant Surface Area/Plant (Acres)
X-Large							
• Regulated ^a	3	-	-	-	-	-	-
• Non-Regulated ^a	2	-	-	-	-	-	-
Large							
• Regulated	2	-	-	-	-	-	-
• Non-Regulated	1	-	-	-	-	-	-
Medium							
• Regulated	1	-	-	-	-	-	-
• Non-Regulated	1	-	-	-	-	-	-
Small							
• Regulated	2	-	-	-	-	-	-
• Non-Regulated	2	-	-	-	-	-	-

^a Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
NONFERROUS SMELTING AND REFINING INDUSTRY
 Industry Segment: Primary Tungsten (APT)
 SIC 3339 (Partial)

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant Surface Area/Plant (Acres)
• Regulated ^a	4	-	-	-	-	-	-
• Non-Regulated ^a	1	-	-	-	-	-	-
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-
• Regulated	-	-	-	-	-	-	-
• Non-Regulated	-	-	-	-	-	-	-

a. Plants located in states with or without regulations similar to RCRA.

Sources: Pope-Reid Associates, Inc.; Arthur D. Little, Inc.; and Sverdrup & Parcel and Associates, Inc.

q. THE ELECTROPLATING AND
METAL FINISHING INDUSTRY

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Captive - Direct

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	-	190	78	-	15,000
Nonregulated	-	190	248	-	46,000
Total	-	-	326	-	61,000
Medium					
Regulated	-	58	95	-	5,500
Nonregulated	-	58	302	-	17,500
Total	-	-	397	-	23,000
Small					
Regulated	-	22	51	-	1,100
Nonregulated	-	20	164	-	3,300
Total	-	-	215	-	4,400
SWG^b					
Regulated	-	3.6	58	-	210
Nonregulated	-	3.6	184	-	660
Total	-	-	242	-	870
Total	-	-	1,180	-	89,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Captive - Direct - Large

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	-	3,200	18	-	60,000
Nonregulated	-	3,200	59	-	190,000
Total	-	-	77	-	250,000
Medium					
Regulated	-	400	11	-	4,500
Nonregulated	-	400	36	-	14,500
Total	-	-	47	-	19,000
Small					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	124	-	270,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Captive - Indirect

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	—	160	203	—	33,000
Nonregulated	—	160	647	—	107,000
Total	—	—	850	—	140,000
Medium					
Regulated	—	59	297	—	17,000
Nonregulated	—	59	948	—	56,000
Total	—	—	1,245	—	73,000
Small					
Regulated	—	19	198	—	3,800
Nonregulated	—	19	630	—	12,200
Total	—	—	828	—	16,000
SWG^b					
Regulated	—	3.7	336	—	1,200
Nonregulated	—	3.7	0	—	—
Total	—	—	336	—	1,200
Total	—	—	3,259	—	230,200

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Captive - Indirect - Large

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	-	5,500	53	-	290,000
Nonregulated	-	5,500	167	-	910,000
Total	-	-	220	-	1,200,000
Medium					
Regulated	-	380	53	-	20,000
Nonregulated	-	380	169	-	65,000
Total	-	-	222	-	85,000
Small					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
SWG^b					
Regulated	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Total	-	-	442	-	1,300,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Job Shops - Direct
 SIC 3471

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants ^a Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	-	-	-	-	-
Nonregulated	-	-	-	-	-
Total	-	-	-	-	-
Medium					
Regulated	-	120	9	-	1,100
Nonregulated	-	120	30	-	3,500
Total	-	-	39	-	4,600
Small					
Regulated	-	30	19	-	570
Nonregulated	-	30	60	-	1,830
Total	-	-	79	-	2,400
SWG^b					
Regulated	-	3.3	26	-	86
Nonregulated	-	3.3	84	-	274
Total	-	-	110	-	360
Total	-	-	228	-	7,300

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

MODEL PLANT SPECIFICATIONS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Job Shops — Indirect
 SIC 3471

Model	Production per Plant (000 MT)	Hazardous Waste per Plant (MT)	No. Plants Represented	Total 1978 Production of Plants Represented (000 MT)	Total Hazardous Waste of Plants Represented (MT)
Large	N.A.			N.A.	
Regulated ^a	—	—	—	—	—
Nonregulated	—	—	—	—	—
Total	—	—	—	—	—
Medium					
Regulated	—	190	109	—	21,000
Nonregulated	—	190	347	—	67,000
Total	—	—	456	—	88,000
Small					
Regulated	—	27	234	—	6,200
Nonregulated	—	27	646	—	19,800
Total	—	—	880	—	26,000
SWG^b					
Regulated	—	3.9	176	—	690
Nonregulated	—	3.9	562	—	2,210
Total	—	—	738	—	2,900
Total	—	—	2,074	—	120,000

a. Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Booz-Allen and Hamilton, Inc.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ELECTROPLATING INDUSTRY

Industry Segment: Captive - Direct

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	74	29
Less than 500 kg/month	195	440
Less than 1000 kg/month	242	870
Greater than 1000 kg/month	938	88,000
Total	1,180	89,000

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ELECTROPLATING INDUSTRY

Industry Segment: Captive — Indirect

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	511	240
Less than 500 kg/month	1,051	2,000
Less than 1000 kg/month	1,408	5,200
Greater than 1000 kg/month	3,365	1,500,000
Total	4,773	1,500,000

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ELECTROPLATING INDUSTRY

Industry Segment: Job Shops — Direct
SIC 3471

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	31	21
Less than 500 kg/month	86	170
Less than 1000 kg/month	110	360
Greater than 1000 kg/month	118	6,900
Total	228	7,300

Source: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ELECTROPLATING INDUSTRY

Industry Segment: Job Shops - Indirect
SIC 3471

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	283	100
Less than 500 kg/month	495	760
Less than 1000 kg/month	738	2,900
Greater than 1000 kg/month	1,436	114,000
Total	2,174	120,000

Sources: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ELECTROPLATING AND METAL FINISHING INDUSTRY
 Industry Segment: Captive - Direct

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant
							Surface Area/Plant (Acres)
Large							
Regulated	75		1	2	2.00	1.40	2.00
Non-Regulated	246			2	2.00	4.40	2.00
Medium							
Regulated	93			2	2.00	.50	2.00
Non-Regulated	299		1	2	2.00	1.70	2.00
Small							
Regulated	46		1	2	2.00	.10	2.00
Non-Regulated	162			2	2.00	.30	2.00
SWG							
Regulated	56			2	2.00	.10	2.00
Non-Regulated	182			2	2.00	.10	2.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS ELECTROPLATING AND METAL FINISHING INDUSTRY

Industry Segment: Captive - Direct - Large

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With				
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments		
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Large									
Regulated	10		1	7	2.00	1.60	2.00	1.00	
Non-Regulated	33		2	24	2.00	1.50	2.00	1.00	
Medium									
Regulated	6		1	4	2.00	.20	2.00	.20	
Non-Regulated	19		2	15	2.00	.30	3.00	.10	
Small									
Regulated									
Non-Regulated									
SWG									
Regulated									
Non-Regulated									

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS ELECTROPLATING AND METAL FINISHING INDUSTRY

Industry Segment: Captive - Indirect

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage		Disposal Impoundments		Treatment/Storage Impoundments	
			Both		No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large	Regulated	200	1	2	2.00	3.10	2.00	1.40
	Non-Regulated	639	1	7	2.00	3.40	2.00	2.00
Medium	Regulated	273	1	3	2.00	1.10	2.00	.60
	Non-Regulated	938	1	9	2.00	1.20	2.00	.70
Small	Regulated	195	1	2	2.00	.40	2.00	.20
	Non-Regulated	623	1	6	2.00	.40	2.00	.20
SWG								
Regulated	332	1	3		2.00	.10	2.00	.10
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

**SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ELECTROPLATING AND METAL FINISHING INDUSTRY**

Industry Segment: Captive - Indirect - Large

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large	Regulated	22	5	26	2.00	2.10	2.00	1.20
	Non-Regulated	77	6	84	2.00	2.10	2.00	1.30
Medium	Regulated	22	5	26	2.00	.10	2.00	.10
	Non-Regulated	78	6	85	2.00	.10	2.00	.10
Small	Regulated							
	Non-Regulated							
SDG	Regulated							
	Non-Regulated							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

**SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ELECTROPLATING AND METAL FINISHING INDUSTRY**

Industry Segment: Job Shops - Direct
SIC 3471

Model	No. of Plants With No Impoundments	Plants With Impoundments		Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Treatment/Storage Impoundments No. per Plant
					Surface Area/Plant (Acres)	Surface Area/Plant (Acres)
Large						
Regulated						
Non-Regulated	7	1		1	2.00	2.00
Medium						
Regulated	27	1		2	2.00	2.00
Non-Regulated						
Small						
Regulated	17	1		1	2.00	2.00
Non-Regulated	57	1		2	2.00	2.00
SWG						
Regulated	25			1	2.00	2.00
Non-Regulated	83	1			2.00	2.00

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS ELECTROPLATING AND METAL FINISHING INDUSTRY

Industry Segment: Job Shops - Indirect
SIC 3471

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With				
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments		
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)	
Large Regulated Non-Regulated									
Medium Regulated Non-Regulated	102		1	6	2.00	1.40	2.00	.80	
	334		1	12	2.00	2.30	2.00	1.30	
Small Regulated Non-Regulated	223		1	10	2.00	.30	2.00	1.30	
	629		1	16	2.00	.50	2.00	.30	
SWG Regulated Non-Regulated	175			1	2.00	.30	2.00	.20	
	560		1	1	2.00	.90	2.00	.30	

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

r. THE SPECIAL MACHINERY MANUFACTURING
INDUSTRY

MODEL PLANT SPECIFICATIONS
SPECIAL MACHINERY MANUFACTURING INDUSTRY
 Industry Segment: Special Industry Machinery
 SIC 355

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	-	758	250	21	27	N.A.	36,400	12,000
Medium	-	179	61	112	149	N.A.	46,600	16,000
Small	-	45	16	216	286	N.A.	22,700	8,000
SWG ^b	-	10	3	814	1,080	N.A.	18,300	6,000
Total	-	-	-	1,163	1,542	-	124,000	42,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
SPECIAL MACHINERY MANUFACTURING INDUSTRY
 Industry Segment: Office, Computing, and Accounting Machines
 SIC 357

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	—	2,300	900	8	12	N.A.	46,300	18,000
Medium	—	340	130	38	53	N.A.	30,900	12,000
Small	—	52	20	31	43	N.A.	3,900	1,500
SWG ^b	—	8	3	97	133	N.A.	1,900	700
Total	—	—	—	174	241	—	83,000	32,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE SPECIAL MACHINERY INDUSTRY
Industry Segment: Special Industry Machinery
SIC 355

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	560	350
Less than 500 kg/month	1,300	2,600
Less than 1000 kg/month	1,900	8,000
Greater than 1000 kg/month	800	36,000
Total	2,700	42,000

Sources: Arthur D. Little, Inc., estimates.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE SPECIAL MACHINERY INDUSTRY

Industry Segment: Office, Computing, and Accounting Machines
SIC 357

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	70	50
Less than 500 kg/month	190	290
Less than 1000 kg/month	230	700
Greater than 1000 kg/month	185	31,000
Total	415	32,000

Source: Arthur D. Little, Inc., estimates.

**SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
SPECIAL MACHINERY MANUFACTURING INDUSTRY**

Industry Segment: Special Industry Machinery

SIC 355

Model	No. of Plants With No Impoundments	Plants With Impoundments			Disposal Impoundments		Treatment/Storage Impoundments	
		Disposal	Treatment/ Storage	Both	No. per Plant	Surface Area/Plant * (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	19		2				2.00	.80
Non-Regulated	25		2				2.00	.80
Medium								
Regulated	110		2				2.00	.40
Non-Regulated	147		2				2.00	.40
Small								
Regulated	215		1				2.00	.10
Non-Regulated	285		1				2.00	.10
SMG								
Regulated	814							
Non-Regulated	1080							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

SPECIAL MACHINERY MANUFACTURING INDUSTRY

Industry Segment: Office, Computing, and Accounting Machines

SIC 357

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/Storage	Both	Disposal Impoundments	Treatment/Storage Impoundments	Surface
					No. per Plant	No. per Plant	Area/Plant (Acres)
Large Regulated	6			2	1.00		1.00
	9			3	1.00		1.00
Medium Regulated	36			2	1.00		.60
	52			1	1.00		.60
Small Regulated	30			1	1.00		.30
	42			1	1.00		.10
SWG							
Regulated	97				1.00		.10
Non-Regulated	133						

G-300

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

s. THE ELECTRONIC COMPONENTS INDUSTRY

**MODEL PLANT SPECIFICATIONS
ELECTRONIC COMPONENTS INDUSTRY
SIC 367**

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	N.A.	2,010	510	36	35	N.A.	143,000	36,000
Medium	-	355	90	165	159	N.A.	115,000	29,000
Small	-	84	21	313	493	N.A.	84,500	22,000
SWG ^b	-	10	3	1,581	1,518	N.A.	32,500	8,000
Total	-	-	-	2,095	2,205	-	375,000	95,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE ELECTRONIC COMPONENTS INDUSTRY

SIC 3670

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	1,200	500
Less than 500 kg/month	2,450	4,000
Less than 1000 kg/month	3,100	8,200
Greater than 1000 kg/month	1,400	87,000
Total	4,500	95,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
ELECTRONIC COMPONENTS INDUSTRY
SIC 3670

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant	Surface Area/Plant (Acres)
Large Regulated Non-Regulated	24		8	4	1.00	3.50	1.00	13.00
	23		8	4	1.00	3.50	1.00	13.00
Medium Regulated Non-Regulated	163		1	1	1.00	2.80	2.00	10.00
	157		1	1	1.00	2.80	2.00	10.00
Small Regulated Non-Regulated	310			3	1.00	.60	2.00	5.00
	488		1	4	1.00	.60	2.00	5.00
SWG Regulated Non-Regulated	1572		4	5	1.00	.10	2.00	.40
	1510		4	4	1.00	.10	2.00	.40

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

t. THE BATTERY INDUSTRY

MODEL PLANT SPECIFICATIONS
BATTERY INDUSTRY
 Industry Segment: Storage Batteries
 SIC 3691

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Waste of Plants Represented (MT)
				R	NR			
Large	N.A.	412	7,300	12	21	N.A.	13,600	240,000
Medium	—	138	2,400	26	47	N.A.	10,100	180,000
Small	—	13	230	35	66	N.A.	1,300	23,000
SWG ^b	—	—	—	0	0	—	—	—
Total	—	—	—	73	134	—	26,000	440,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

MODEL PLANT SPECIFICATIONS
BATTERY INDUSTRY
Industry Segment: Primary Batteries
SIC 3692

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	N.A.	850	120	4	2	N.A.	5,100	740
Medium	-	330	50	6	4	N.A.	3,300	490
Small	-	158	23	7	5	N.A.	1,900	280
SWG ^b	-	24	3	17	11	N.A.	700	90
Total	-	-	-	34	22	-	11,000	1,600

a. Regulated plants are located in states with requirements similar to RCRA.
Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE BATTERY INDUSTRY

Industry Segment: Primary Batteries

SIC 3692

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	14	9
Less than 500 kg/month	22	51
Less than 1000 kg/month	28	100
Greater than 1000 kg/month	28	1,500
Total	56	1,600

Sources: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

BATTERY INDUSTRY

Industry Segment: Storage Batteries

SIC 3691

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	9			3	2.00	1.80	2.00	.20
Non-Regulated	18			3	2.00	3.20	2.00	.30
Medium								
Regulated	24			2	2.00	2.70	2.00	.30
Non-Regulated	45			2	2.00	4.60	2.00	.50
Small								
Regulated	35							
Non-Regulated	66							
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS

BATTERY INDUSTRY

Industry Segment: Primary Batteries

SIC 3692

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments		Treatment/Storage Impoundments	
					No. per Plant	Surface Area/Plant (Acres)	No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	2		2				2.00	1.00
Non-Regulated	1		1				2.00	.50
Medium								
Regulated	5		1				2.00	1.10
Non-Regulated	4							
Small								
Regulated	7							
Non-Regulated	5							
SWG								
Regulated	17							
Non-Regulated	11							

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.

u. THE DRUM RECONDITIONING INDUSTRY

MODEL PLANT SPECIFICATIONS
DRUM RECONDITIONING INDUSTRY
SIC 5085

Model	Production per Plant (000 drums)	Hazardous Waste per Plant (MT)	No. Plants ^a Represented N NR	Total 1978 Production of Plants Represented (000 drums)	Total Hazardous Waste of Plants Represented (MT)
Large	800	1,200	9 11	18,000	23,000
Medium	230	340	56 74	30,000	44,000
Small	76	120	21 20	4,000	6,000
SWG ^b	-	-	- -	-	-
Total	-	-	86 114	50,000	73,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
DRUM RECONDITIONING INDUSTRY
SIC 5085

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With			
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundment No. per Plant	Surface Area/Plant (Acres)
Large								
Regulated	9							
Non-Regulated	11							
Medium								
Regulated	56							
Non-Regulated	74							
Small								
Regulated	21							
Non-Regulated	29							
SWG								
Regulated								
Non-Regulated								

Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment Inventory by EPA's Office of Drinking Water.

v. THE CHEMICAL WHOLESALING INDUSTRY

MODEL PLANT SPECIFICATIONS
CHEMICAL WHOLESALING INDUSTRY
 Industry Segment: Chemical Wholesalers
 SIC 5161

Model	Production per Plant (000 MT)	Employment per Plant	Hazardous Waste per Plant (MT)	No. of Plants ^a Represented		Total 1978 Production of Plants Represented (000 MT)	Total Employment of Plants Represented	Total Hazardous Waste of Plants Represented (MT)
				R	NR			
Large	-	-	-	0	0	-	-	-
Medium	-	-	-	0	0	-	-	-
Small	-	-	-	0	0	-	-	-
SWG ^b	N.A.	11	1.5	1,660	1,740	N.A.	37,000	5,000
Total	-	-	-	1,660	1,740	-	37,000	5,000

a. Regulated plants are located in states with requirements similar to RCRA.

Nonregulated plants are located in states without requirements similar to RCRA.

b. Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Source: Arthur D. Little, Inc., estimates. Model plant specifications based upon employment and plant size distribution from
County Business Patterns, 1977.

SMALL WASTE GENERATOR SUBCATEGORIES FOR THE CHEMICAL WHOLESALING INDUSTRY

SIC 5161

Waste Generation per Plant Category	No. of Plants in Waste Generation Category	Total Waste From All Plants in Waste Generation Category (Metric Tons)
Less than 100 kg/month	850	900
Less than 500 kg/month	3,400	5,000
Less than 1000 kg/month	3,400	5,000
Greater than 1000 kg/month	0	-
Total	3,400	5,000

Source: Arthur D. Little, Inc., estimates.

SURFACE IMPOUNDMENT SPECIFICATIONS OF MODEL PLANTS
CHEMICAL WHOLESALING INDUSTRY
SIC 5161

Model	No. of Plants With No Impoundments	Plants With Impoundments			Plants With		
		Disposal	Treatment/ Storage	Both	Disposal Impoundments No. per Plant	Surface Area/Plant (Acres)	Treatment/Storage Impoundments No. per Plant
Large Regulated Non-Regulated							
Medium Regulated Non-Regulated							
Small Regulated Non-Regulated							
SWG Regulated Non-Regulated							
	1658		2				2.00
	1738		2				2.00
							.10
							.10

Regulated plants are located in states with requirements similar to RCRA.
 Nonregulated plants are located in states without requirements similar to RCRA.

Small Waste Generator: a plant that generates less than 12 MT of hazardous waste per year.

Sources: Arthur D. Little, Inc., estimates based on Surface Impoundment Assessment inventory by EPA's Office of Drinking Water.